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IDENTIFIERS	*Southeast Asians

ABSTRACT

Descriptions of the Vietnamese and Southeast Asian educational systems are presented. The purpose of the document is to provide American educators with background information to help Vietnamese refugees adjust to the American educational system. This booklet was developed by Iowa State University to alleviate the adjustment problems of Vietnamese and other Indochinese refugee children attending Iowa schools. The entire Indochinese system, which was patterned after the French national educational system, is compared to the American system. Three major sections outline and describe the structure of Vietnamese elementary, secondary, and higher education; curriculum content in elementary, secondary, technical, and agricultural levels; and grading and evaluation procedures. Two sections provide a comparative analysis of school system structure in Southeast Asia, America, and Iowa. Similarities in organizational patterns, curricula, and course content are discussed. Differences exist in areas of grading, student grouping, credit for learning, and educational philosophy. Another section suggests methods by which American teachers and administrators can deal with problems of school records, Indochinese names, and grade placement. A final section discusses intelligence testing and health problems. (AV)

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EDUCATIONAL SYSTEMS
IN SOUTH VIETNAM
AND OF SOUTHEAST ASIANS
IN COMPARISON WITH
EDUCATIONAL SYSTEMS
IN THE UNITED STATES

BY
WILLIAM A. HUNTER
AND
LIEM THANH NGUYEN

SO 010 925

RESEARCH INSTITUTE FOR STUDIES
IN
EDUCATION
COLLEGE OF EDUCATION
IOWA STATE UNIVERSITY
AMES, IOWA
1977

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FOREWORD

On April 25, 1975, by Memorandum to the Secretary of State, President Gerald R. Ford of the United States initiated American assistance for the relocation of South Vietnamese from South Vietnam in the United States. By Executive Order 11860, May 19, 1975, the framework and spirit of the relocation were placed in the historical and constitutional mold of the United States in the following manner:

> "Since the arrival of the first settlers on our eastern seaboard nearly 400 years ago, America has been a refuge for victims of persecution, intolerance, and privations from around the world. Tide after tide of immigrants have settled here and added to our well-being as a nation.
>
> ------------------
>
> The arrival of thousands of refugees, mostly children, will require many adjustments on their part and considerable assistance on ours. But it is in our best interest as well as theirs to make this transition as gracious and efficient as humanly possible."[1]

By August 1975 of the more than 131,000 South Vietnamese and Cambodian refugees, approximately 57,500 were moved from resettlement camps to permanent homes in the United States.

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[1] Presidential Documents Title 3 - The President Executive Order 11860, May 19, 1975 - Establishing the President's Advisory Committee on Refugees. In Federal Register, Vol. 40, No. 99, Wednesday, May 21, 1975.

Immediately following these relocations, many American schools faced a new challenge in providing equal and adequate educational opportunities for an estimated 50,000 school-age refugees. Because refugee families are dispersed so widely throughout the United States, many teachers for the first time faced a new kind of intercultural educational challenge; that of working with non-English speaking Vietnamese or Cambodian students in their classes, often in small numbers, having little or no knowledge about their new students, and generally without resources or assistance for effective classroom work.

Besides the estimated 40,000 refugee children of elementary or high school age (6 to 17), another 10,000 to 20,000 were eligible to attend college. This national development clearly challenged the entire educational enterprise.

After the physical resettlement and relocation of the Southeast Asian refugees in the United States, it is important for all institutions and agencies to help them adjust to their new national environment and become members of a community. In this endeavor, education naturally plays an important role including both formal and informal training.

Problems of varying magnitude and complexity continuously confront teachers as well as sponsors and advisors in student relocation. This is especially true in cases of emergency without planned alternatives. Perhaps the most urgent problems in this situation emanate from the basic need for communication and for some appreciation of the cultural heritage traits of the refugees as a people.

Additionally, teachers of refugee students and prospective students face the specific problem of determining what students have studied in Vietnam or Cambodia or Laos, assessing their level of attainment, and assisting them in finding themselves in the American system of education as well as helping them understand and work with their counterparts in American life.

Moreover, sponsors and advisors of adult refugees have the problem of determining the background experiences, skills, and potentials of adult workers. With that knowledge it is possible, on one hand, to help refugees master the English language so as to communicate with others and begin to understand their new society, their duties, and channels of utilizing their interests in being United States citizens; and, on the other hand, make use of their skills and potentials in the world of work for their own benefit and that of the country as a whole.

The Vietnamese sponsorship program has served as the impetus for many Vietnamese refugees to relocate in Iowa as well as in other states. Although exact data in Iowa are unavailable, it is estimated that upward of 1,000 refugees have located or will be relocating in Iowa. The State of Iowa, therefore, must address itself to these and other problems.

relating to refugee relocation and intercultural education.

Many temporary, and often uncoordinated, programs have been instituted to aid the Vietnamese and other refugees in their relocation, however, one of the most important and yet undefined programs has involved meeting the educational needs of the refugee elementary, secondary, and adult education students.

Iowa State University, through its Research Institute for Studies in Education (RISE) and its multicultural education program development has developed a model to aid in the implementation of strategies focusing on alleviating the problems associated with the adjustment of Vietnamese and other refugee children attending Iowa schools.

The RISE model was designed to aid in the development of concepts and materials, the application of strategies and techniques in classroom instruction, and adult advisement of refugee or bilingual learners. The structure suggests approaches to working with the following problems:

1. The problems of communication and cultural understanding,
2. The problem of educational comparability and placement, and
3. The problem of cultural equivalency, relocation, and adjustment.

The RISE approach to dealing with the facets of the previously listed problem clusters resulted in the development of the following materials:

1. The Vietnamese Culture Kit,
2. Educational Systems in South Vietnam and of Southeast Asians in Comparison with Educational Systems in the United States,
3. Bilingual English-Vietnamese Phrase and Word Package for Practical Situations, and
4. Bilingual English-Vietnamese Technical Word Package in School Subject Areas.

The overall paradigm of this effort is the Multicultural Education Program (MEP). The models specifically designed to be used in connection with the educational problems associated with the relocation of the Southeast Asians - are modules of the overall paradigm - and are referred to as the Southeast Asian Bilingual Education Information Series (SEABEID).

The Bilingual Education Information Series (BEIS) consists of the following:

1. The Vietnamese Culture Kit. Culture kits are for adults and children and will help the teacher and other children in the class become better acquainted with the Vietnamese and other refugee children enrolled in the school district. This kit will be particularly useful to American sponsors and teachers dealing with Vietnamese refugee students and adult workers and learners.

It is a brief description of the cultural background of the Vietnamese and the geography of the country of Vietnam, the history of the Vietnamese people, their language, beliefs, and system of values. The kit is designed to provide the American sponsors and teachers with necessary information about the Vietnamese refugee as students and adult learners. A meaningful understanding of the Vietnamese cultural background to facilitate the job of American sponsors and teachers in helping students and adults in the classroom and in work situations. The pamphlet also includes some hints on how to deal with the problems arising from the cultural differences between the Americans and the Vietnamese.

A strategy which may be used to implement the use of the Vietnamese Culture Kit consists of three parts: Bilingual Education Information Dissemination (BEID), School In-Service Consultation and Adaption (SISCA), and Research and Evaluation of Education Progress (REEP). This strategy will provide a basic course of action and data base for assessment and evaluation. Research in this area will provide invaluable insights into the effectiveness of in-service multicultural orientation programs, multicultural education teaching, and refugee learning. This research should be of interest to the

Iowa State Department of Public Instruction, Area Education Agencies, local school districts, and research agencies seeking to provide services and assess educational progress.

2. A Comparison of the Educational Systems and Curricula of Vietnam and of Southeast Asians with that of the United States. This comparison is a description of the educational systems through which Vietnamese and Southeast Asians have come and Southeast Asian countries' educational systems as they relate to the educational system of the United States. This comparison will be particularly useful for American educational administrators and teachers dealing with the Vietnamese and other Indochinese students. The American educators are provided information about the Southeast Asians educational system (education administration, school organization, curriculum, examination, and grading system) to understand the student's academic background and to improve their learning process in American schools. The knowledge of the educational systems extends to the knowledge of the whole Indochinese system which was patterned after the educational organization of the French National System.

3a. Bilingual Phrase and Word Package for Practical Situations (two parts). The phrase and word packages are to aid teachers, adult educators, and employers in understanding and communicating with the Vietnamese. Words and phrases are used as an aid to students and adults in following the explanations. Practical situations are used; such as obtaining a job, community responsibilities, obtaining a driver's license, the family and marriage, and social institutions such as the school, church, and industry. These situations are written in both English and Vietnamese. The package includes:

a. Materials for adults which may help their maturity and assist in the development and learning of their children.

b. Aids to assist students and adults in cultural and educational understandings.

3b. Useful English-Vietnamese Phrase-Book for Adults. This phrase-book is particularly designed for American sponsors and Vietnamese refugees for the purpose of meeting the immediate needs of communication between Vietnamese refugees and American sponsors; situational Vietnamese-English lessons that help the Vietnamese survive in completely new environment situations such as: at the doctor's office, placing a telephone call, at the grocery store, at the post office, asking directions, enrolling children in school, job interviews, learning traffic regulations and driver's guides, applying for medical assistance . . . .

4. English-Vietnamese Technical Word Package for Practical Situations. Technical vocabulary booklets for American teachers and Vietnamese students in the middle classes with explanations and examples written in both English and Vietnamese, designed to meet the immediate needs of the Vietnamese students to help them understand mathematics, science, and social studies in American middle level curriculum. Can also be used by American teachers working with Vietnamese students as an instrument to improve Vietnamese student's learning process in mathematics, science, and especially in social studies.

The Vietnamese information series was written principally by Mr. Liem Thanh Nguyen who, until April 1975 was Vice-Minister of Culture, Education, and Youth in Vietnam. This position is equivalent to the Undersecretary of Health, Education, and Welfare in the United States. Having been educated in Vietnamese schools and French schools and universities, and having had experience not only as a teacher, a principal, an educational specialist to the President of Vietnam, but also as a representative of Vietnam in international educational settings in Switzerland, Singapore, Malaysia, Thailand, the United States, and in the United Nations, Mr. Liem brings a background of rich experience to the development of this series.

Many people contributed to the development of a work of this magnitude making it impractical to do other than express general thanks to the various ones who contributed so helpfully to the development of this series. Even so some special thanks must be expressed to Dr. Larry Ebbers (school administration) and Dr. Glenn Smith (comparative education) for reading the manuscripts and giving their helpful suggestions; to Dean Virgil Lagomarcino for his support and encouragement in the development of this series; to Dan Griffen for the support of the Iowa State University Research Foundation; to Mrs. Phung Kim Nguyem for invaluable insights and suggestions; and to Mrs. Becky Parker and Mrs. Kris Weigelt for their tireless handling of the translation of my manuscript hieroglyphics into readable form.

The problems of refugee resettlement are not short-ranged nor superficial. Many other problems such as health, social adjustment, economic stability, and personal realization have not been examined.

For a long time after physical resettlement in 1975-76, assistance of one form or another will be required by all refugee students who needed elementary, secondary, and postsecondary education help and adults who need to be helped in their work and social adjustments.

William A. Hunter
Director, Research Institute for
Studies in Education
Professor of Professional
Studies in Education

PREFACE

BILINGUAL EDUCATION INFORMATION SERIES

Comparison of the Educational Systems of Vietnam and Southeast Asians with that of the United States.

Teachers in schools throughout the United States have the professional responsibility and personal obligation to appreciate and understand cultural diversity, an inescapable part of American life, in working with children in the schools. All teachers should be fully aware of the important implications, the enriching effects and positive potentials of cultural integrity in the contributions of diverse cultures to all learning. The United States, being a society and nation of multicultural mosaics, imposes on its institutions some very special responsibilities relevant to and congruent with implementing democracy as a philosophy and way of life. These special considerations, as a responsibility of the schools, require each educator to be able to:

1. Appreciate, acknowledge, and respect every culture contributing to the nation's society,
2. Have some appreciation for and understandings of the attitudinal, conceptual, and experiential problems involved in multicultural education.

3. Have an understanding of the competencies for working in multicultural learning situations, and
4. Analyze the needs, incorporate the educative cultural elements, learning styles, and values of diverse cultures in curriculum development, program scope, course content, and teaching procedures provided all children in the schools.

During 1975 many South Vietnamese, Cambodians, and Thaidams relocated in the United States. Their presence added another dimension to the multicultural mosaic of the nation's society. In order to provide a better understanding of the refugee children (especially the Vietnamese, Cambodian, and Thaidam) and their problems, as well as develop effective approaches for problem resolutions, it is helpful to understand the historical, cultural, and educational background from which they come. A portion of this multicultural education series is designed to provide teachers, administrators, sponsors, and children with information which will aid in refugee transition to the mode of life in the United States.

Much confusion and concern has existed regarding the comparability of the Indochinese educational systems with those of the United States; the integration of Indochinese students into the educational systems of the United States; appropriate and informed administrative alternatives for student placement in American schools; teacher and pupil classroom interaction and learning; teacher sensitivity to a different set of values and learning styles; short and long-range needs of refugee students; the help and resources needed (and available) to deal with the problems attending these circumstances.

A comparison of the educational systems from which Southeast Asian students come with the educational equivalents of these systems in the United States, will enable educators to develop and institute more informal placement policies and practices based on learning experiences the child is expected to have had in the Southeast Asian school attended.

When Indochinese children enter American public schools, not all the problems will be theirs. Administrators, counselors and teachers will face the problem of orienting, placing and counseling children from schools, and from a culture, vastly different from their own. In an effort to familiarize American educators with the Indochinese educational systems, this document has been prepared.

We have not attempted to describe fully the curricula for a variety of reasons. It should be remembered that academic training within a specific discipline of various fundamental levels is basically uniform around the world. That is, in a mathematics course in Vietnam, the United States or Mexico, students will study algebra, geometry, advanced algebra and trigonometry. Similarly in a history series, while different education systems may stress different methodologies or events, or a particular political perspective, the basic facts and relationships are the same. In order to understand the systems as operated in Southeast Asia, one must remember that the method of teaching was primarily the lecture method, memorization of facts, and employed learning by observation, rather than discovery learning.

The summary of curricula has been prepared to help educators help the child. The summary indicates what the Ministry of Education in their countries wanted taught; however, given the distance between the Ministry and the schools, the difficult conditions under which education was carried out and the relative lack of teacher preparation, what the child actually learned may have been somewhat different. This coupled with the fact that very few parents were able to obtain school records before they left their country, will pose problems in assessing what the child has learned. However, it is hoped that having the guide here provided will constitute a starting point for the job of student placement.

William A. Hunter
Director, Research Institute for
Studies in Education
Professor of Professional
Studies in Education

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INTRODUCTION

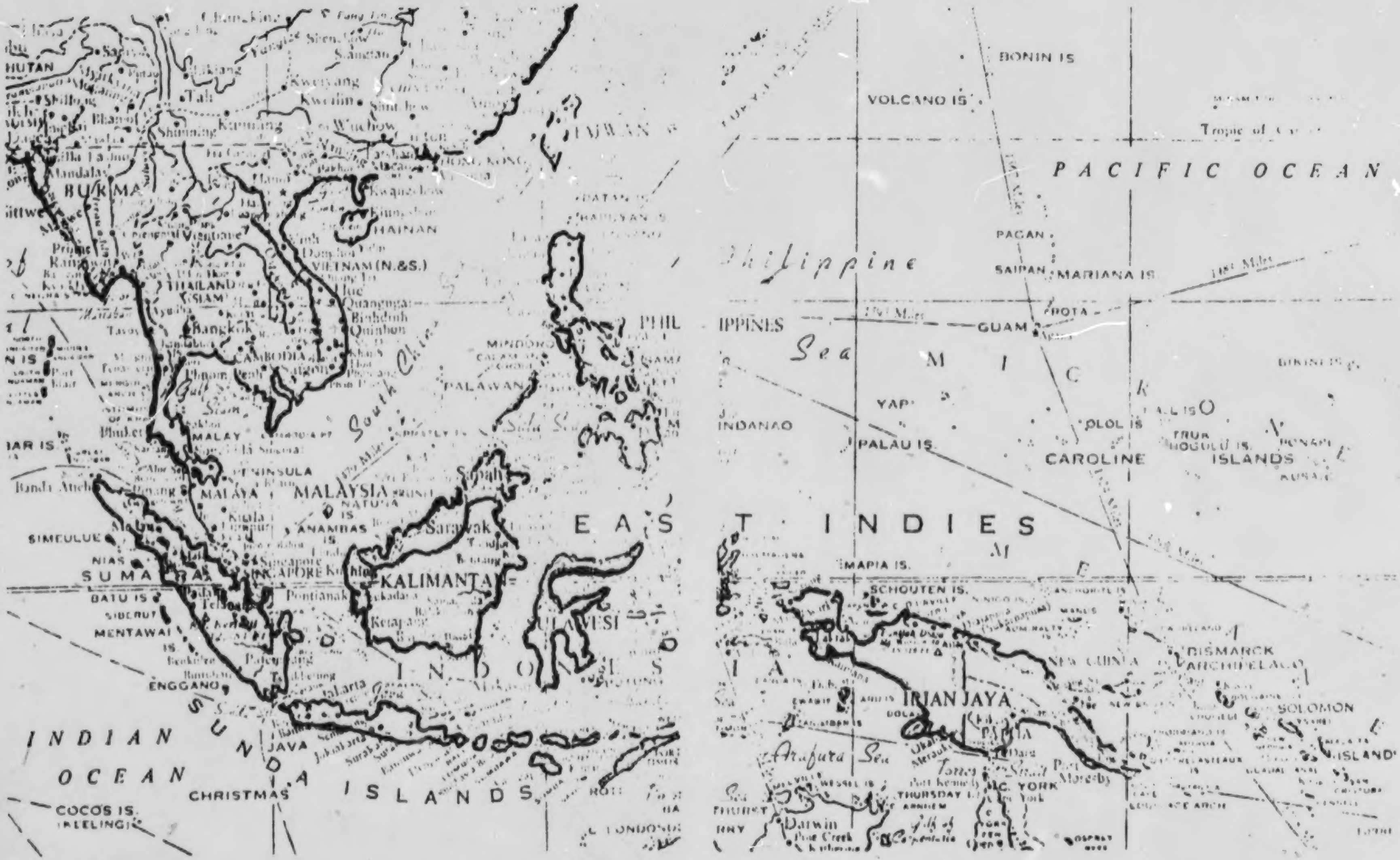
The eight countries which make up South East Asia are Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnam. Prior to 1975 these countries were members of the South East Asia Ministry of Education Organization (SEAMEO).

In terms of education these countries formed three different groups:

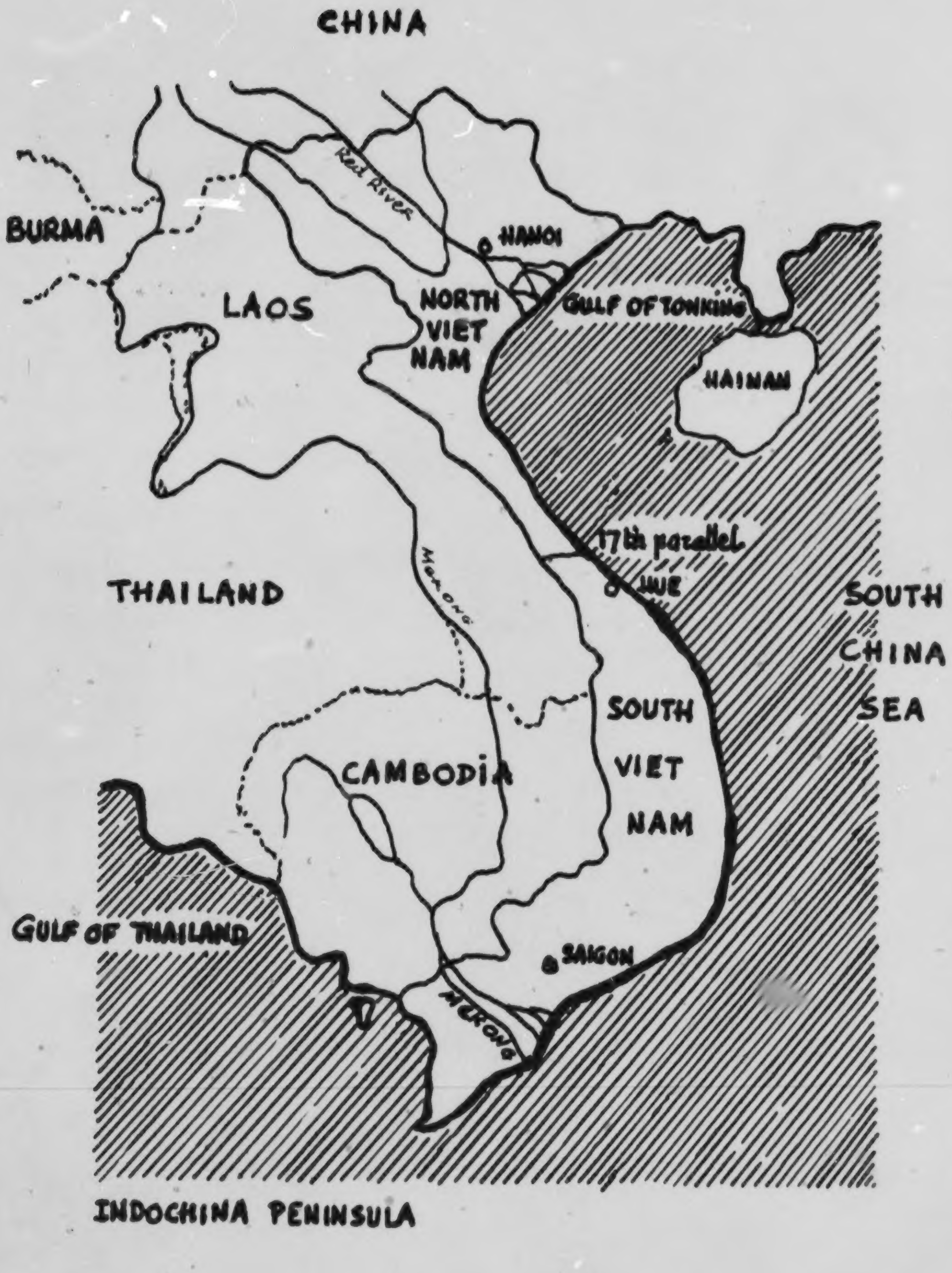
Group 1: Indochina with Cambodia, Laos, and Vietnam
Group 2: Malaysia, Singapore, and Thailand
Group 3: Indonesia and Philippines.

The three countries of Group 1 are old French colonies, thus, prior to 1975 they were strongly influenced by the French system in terms of education. Curricula, organization, teaching methods, and examinations were modeled after the French patterns. Many French terms are still used. The year of 1975 was another turning point in the history of these three countries. Under the Communist regime the education system, as other social institutions, changed.

Malaysia, Singapore, and Thailand form Group 2 of the South East Asia peninsula. Malaysia and Singapore are very similar in terms of ethnic composition and cultural background. The ethnic composition is approximately Malays (44%), Chinese (36%),


BHUTAN
BURMA
Mandalay
Rangoon
THAILAND (SIAM)
Bangkok
Vientiane
CAMBODIA
Saigon
VIETNAM (N.&S.)
Hanoi
HAINAN
HONG KONG
Kweiyang
Kweilin
Wuchow
TAIWAN
Gulf of Siam
South China Sea
MALAY PENINSULA
MALAYA
MALAYSIA
SINGAPORE
Phuket
Banda Aceh
SIMEULUE
NIAS
SUMATRA
BATU IS.
SIBERUT
MENTAWAI IS.
ENGGANO
NATUNA IS.
ANAMBAS IS.
Sabah
Sarawak
KALIMANTAN
Pontianak
SULAWESI
MINDORO
PALAWAN
Sulu Sea
PHILIPPINES
MINDANAO
Philippine Sea
EAST INDIES
INDONESIA
Java Sea
JAVA
SUNDA ISLANDS
CHRISTMAS
INDIAN OCEAN
COCOS IS. (KEELING)
BONIN IS.
VOLCANO IS.
Tropic of Cancer
PACIFIC OCEAN
PAGAN
SAIPAN
MARIANA IS.
ROTA
GUAM
MICRONESIA
YAP
PALAU IS.
CAROLINE ISLANDS
TRUK
BIKINI
MAPIA IS.
SCHOUTEN IS.
NEW GUINEA
IRIAN JAYA
PAPUA
BISMARCK ARCHIPELAGO
SOLOMON ISLANDS
Arafura Sea
Torres Strait
THURSDAY I.
C. YORK
Port Moresby
Darwin
Gulf of Carpentaria

MAP OF SOUTHEAST ASIA


CHINA
BURMA
Red River
HANOI
LAOS
NORTH VIET NAM
GULF OF TONKING
HAINAN
17th parallel
THAILAND
HUE
SOUTH CHINA SEA
MEKONG
SOUTH VIET NAM
CAMBODIA
GULF OF THAILAND
SAIGON
MEKONG

INDOCHINA PENINSULA

Indians and Pakistanis (10%), and non-Malay indigenous people (8%). The Chinese, Malays, and Indians, while considering themselves Malaysians, tend to maintain their own cultural identities. They maintain their ties through educational and cultural organizations. The medium of instruction is, thus, English, Chinese, and Malay. Thailand was the unique country in South East Asia which had never experienced European colonization during the 19th century.

Apart from the South East Asian peninsula, Group 3 is composed of two island countries, Indonesia and Philippines. Indonesia is the largest and most populous among the different countries of South East Asia. During the 19th century in parts of Indonesia the Portuguese established a number of primary schools which provided training in reading, writing, arithmetic, and other useful skills. But under the Dutch colonization the educational system changed with the direction of colonial policy in general.

Physically, as well as in other ways, the Philippines present several similarities with Indonesia.

VIETNAMESE EDUCATIONAL SYSTEM

General Information

The Republic of Vietnam, or South Vietnam, covers an area of 173,300 Km^2 and had a population estimated at 20,502,000 in 1974. One-fifth of the population was in school during the school year 1973-74, with 3,101,560 in elementary education, 1,091,779 in secondary education, and 101,454 in higher education. (Figure 1)

The government was highly centralized and so was the organization of the Ministry of Culture, Education, and Youth (MOCEY). The top (Central) level of the Ministry of Culture, Education, and Youth consisted of two main sections (or divisions): the Steering Section and the Specialized and Executive Section.

The Steering Section was headed by the Minister, the Vice-Minister, and the four Special Assistants to the Minister.

The Specialized and Executive Section, headed by the Secretary General and the Deputy Secretary General, was divided into fourteen directorates and one center. (Figure 2)

At the local level, the provincial Culture, Education, and Youth Service had responsibility for all elementary and secondary education. There were 51 provincial Culture, Education, and Youth Services in all the country.

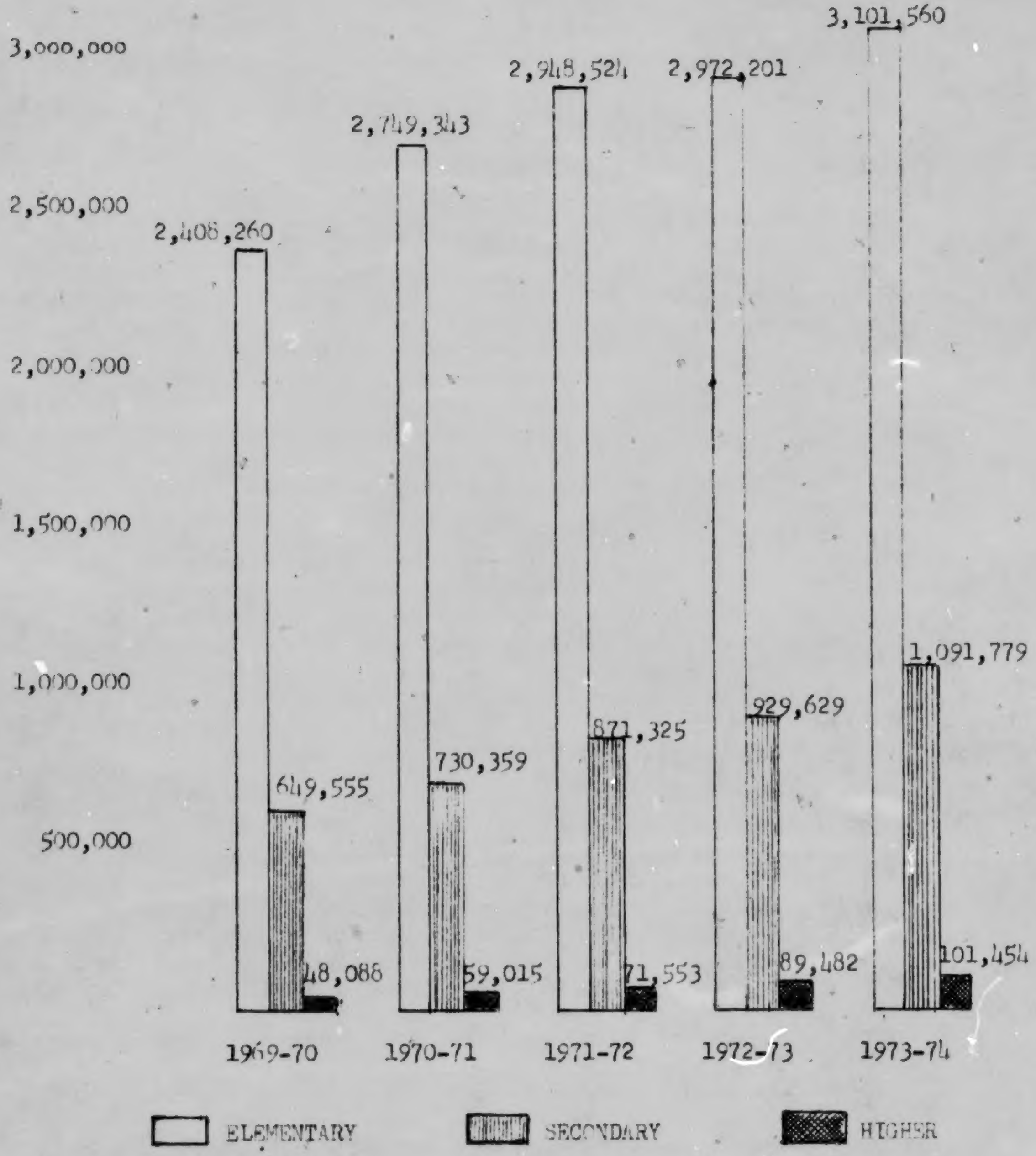


Fig. 1 ELEMENTARY, SECONDARY, HIGHER EDUCATION STUDENT DEVELOPMENT IN VIETNAM 1969-1970 to 1973-1974

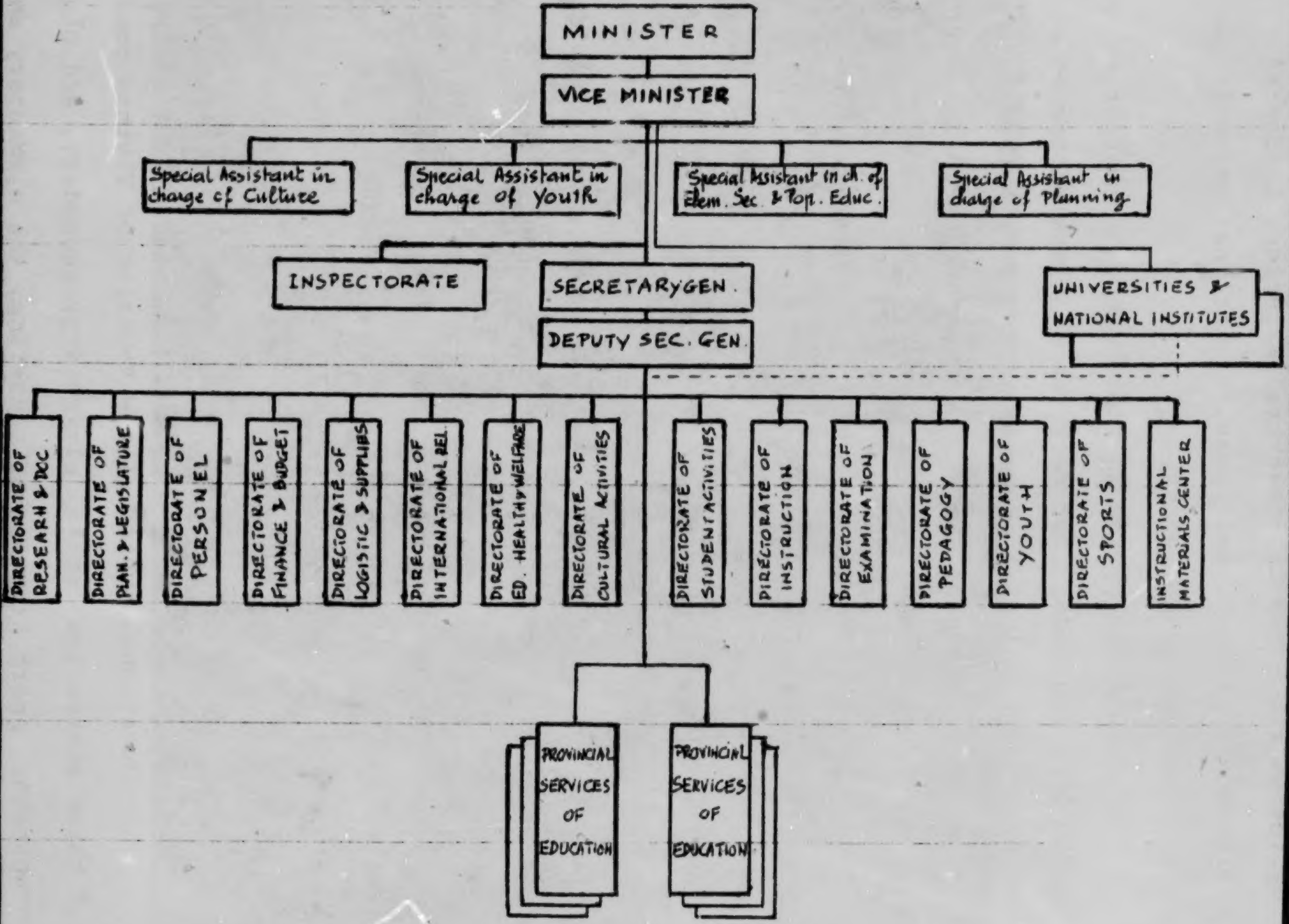

MINISTER
VICE MINISTER
Special Assistant in charge of Culture
Special Assistant in charge of Youth
Special Assistant in ch. of Elem. Sec. & Pop. Educ.
Special Assistant in charge of Planning
INSPECTORATE
SECRETARYGEN.
UNIVERSITIES & NATIONAL INSTITUTES
DEPUTY SEC. GEN.
DIRECTORATE OF RESEARH & DOC
DIRECTORATE OF PLAN. & LEGISLATURE
DIRECTORATE OF PERSONEL
DIRECTORATE OF FINANCE & BUDGET
DIRECTORATE OF LOGISTIC & SUPPLIES
DIRECTORATE OF INTERNATIONAL REL
DIRECTORATE OF ED. HEALTH & WELFARE
DIRECTORATE OF CULTURAL ACTIVITIES
DIRECTORATE OF STUDENT ACTIVITIES
DIRECTORATE OF INSTRUCTION
DIRECTORATE OF EXAMINATION
DIRECTORATE OF PEDAGOGY
DIRECTORATE OF YOUTH
DIRECTORATE OF SPORTS
INSTRUCTIONAL MATERIALS CENTER
PROVINCIAL SERVICES OF EDUCATION
PROVINCIAL SERVICES OF EDUCATION

Fig. 2 CHART OF ORGANIZATION OF THE MINISTRY OF CULTURE EDUCATION AND YOUTH IN S.V.N.

All education was under the direction of the MOCEY. Curriculum requirements, teachers' salaries, teachers' assignment to schools and areas, educational expenditures . . . were determined by the MOCEY.

The educational system in Vietnam may be thought of as a system in transition. For many years it was patterned after the old French colonial educational system. Although there were some reforms in recent years most education continues to reflect the past in both procedure and subject matter. Elementary, secondary, and higher education were rigidly segmented. French terms were still used for many diplomas and certificates awarded.

Due to the shortage of school buildings (lack of classrooms) most schools had two or three shifts a day. Therefore, the hours of the school day were limited and the teacher-pupil ratio was 1 to 60. On the other hand, many evening classes were opened to cope with the ever-increasing student population.

The grading system and examinations were rigorous. The lecture method of teaching was predominant. Texts, reference books, and laboratories were rare.

Components of the Vietnamese Educational System

The educational system of the Republic of Vietnam consisted of three successive levels: elementary, secondary, and higher education. Apart from higher education, the elementary and secondary levels were combined into one single system with its uninterrupted twelve-year program of instruction. (Figure 3)

Elementary Education

Elementary education, designed for children from six to ten years of age, was free and compulsory from grade 1 to grade 5. Children started grade 1 at the age of six. All elementary schools were community schools.

Secondary Education

Secondary education consisted of grade 6 through grade 12 and was divided into two levels or "cycles":

-Secondary First Cycle - from grade 6 through grade 9,

-Secondary Second Cycle - from grade 10 through grade 12.

Secondary education, on the other hand, comprised four branches:

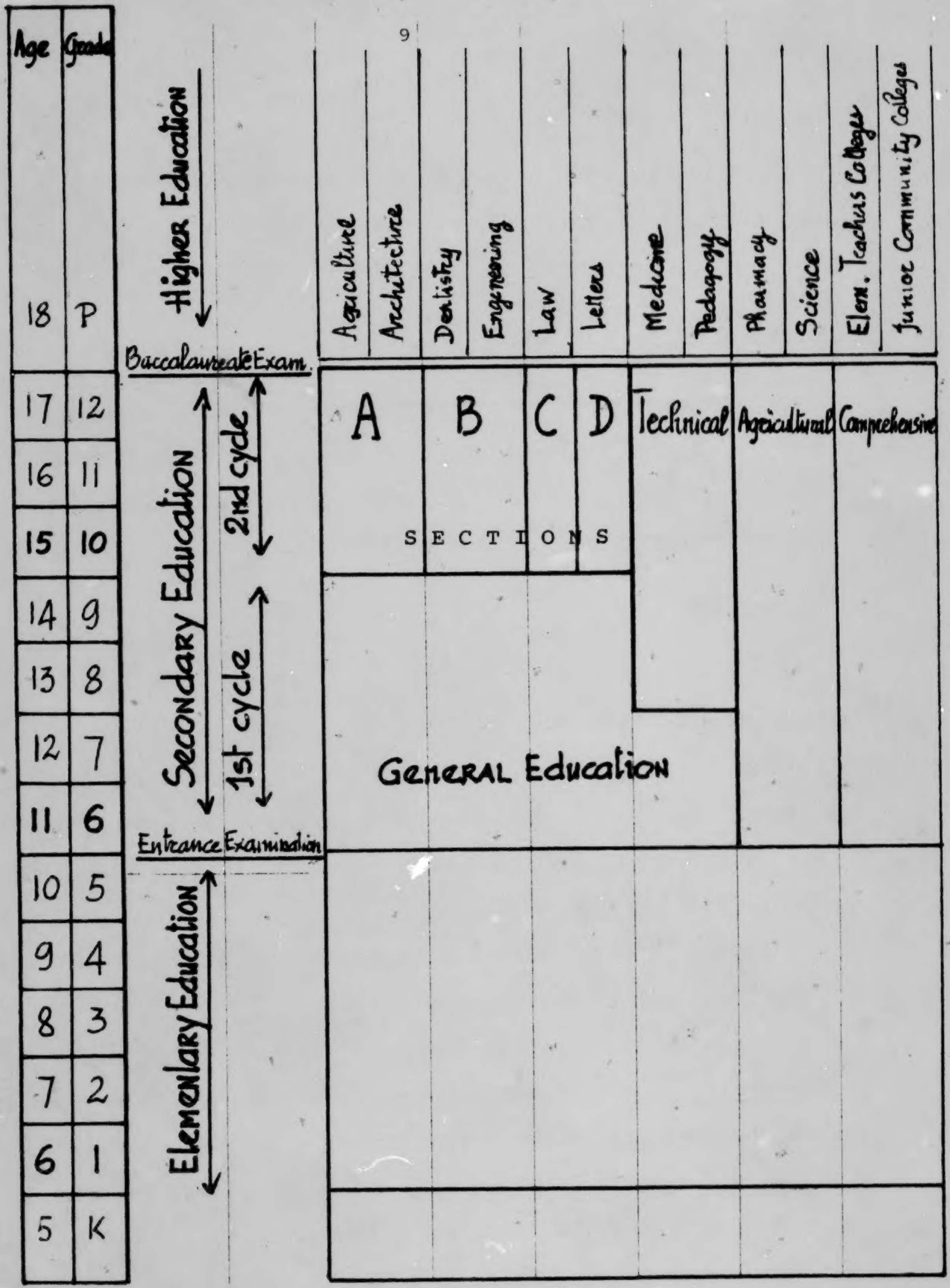
-General education,

-Technical and vocational education,

-Agricultural education, and

-Comprehensive education.

Secondary general education branch. The secondary general education branch of education was broadly basic to most academic programs and enrolled the majority of students. It was the most important in Vietnamese secondary schools. Although public secondary education was free, to be admitted to grade 6 in a


Age
Grade
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5
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4
8
3
7
2
6
1
5
K
Higher Education
Baccalaureate Exam.
Secondary Education
2nd cycle
1st cycle
Entrance Examination
Elementary Education
Agriculture
Architecture
Dentistry
Engineering
Law
Letters
Medicine
Pedagogy
Pharmacy
Science
Elem. Teachers Colleges
Junior Community Colleges
A
B
C
D
Technical
Agricultural
Comprehensive
SECTIONS
General Education

Fig. 3 CHART OF VIETNAMESE EDUCATIONAL SYSTEM

public secondary school a student had to finish grade 5 and pass a competitive entrance examination. After grade 9, when a student entered grade 10, he was required to choose the track or "section" that he would pursue during his second cycle years in secondary school. There were four tracks, commonly referred to as Sections A, B, C, and D. (Fig. 3) Each emphasized the following: (Enrollments shown in Figure 4)

1. Section A - Experimental science with emphasis (or major) on natural sciences (biology), physics, and chemistry. (Basic to collegiate agriculture and architecture.)
2. Section B - Mathematics with emphasis on mathematics, physics, and chemistry. (Basic to dentistry and engineering.)
3. Section C - Modern literature with emphasis on philosophy, literature, and foreign language. (Basic to law.)
4. Section D - Classical literature with emphasis on philosophy, literature, and Chinese or Latin. (Basic to letters.)

Until 1972 a student who had completed grade 11 was required to pass a national examination in order to be eligible to enter grade 12. This examination is known as the "Baccalaureate First Part Examination", commonly referred to as the "Bac I". The "Bac I" was abolished in 1973.

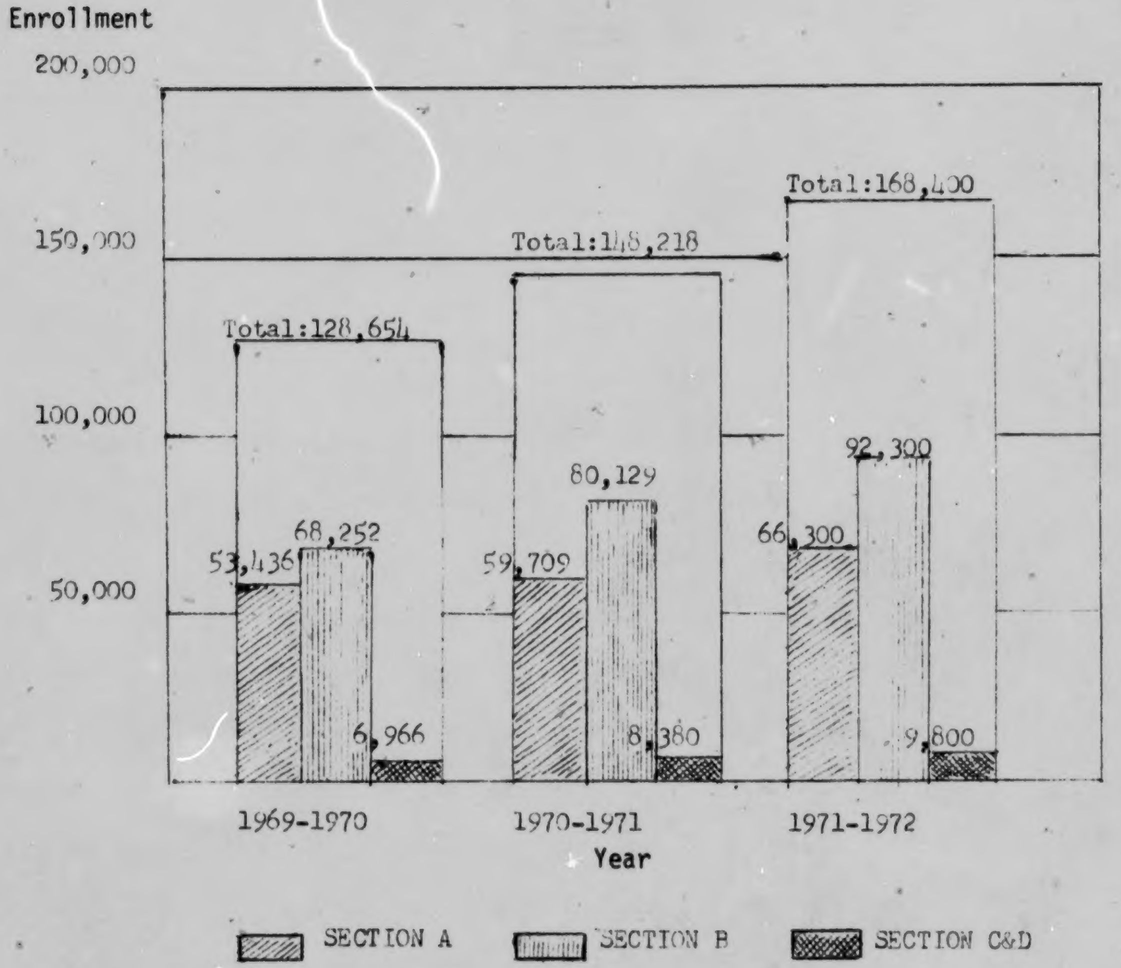

Fig. 4 ENROLLMENT BY SECTION IN VIETNAMESE SCHOOLS (Grades 10, 11, 12) 1969-1972

Originally when a student had completed grade 12 he was required to pass another national examination known as the "Baccalaureate Second Part Examination", commonly referred to as the "Bac II".

When the long-standing Baccalaureate I examination was abolished during the academic year 1972-73 the General Education Baccalaureate Diploma was established to replace the old "Bac II" Diploma.

The technical and vocational education branch of education. Prior to 1973 technical and vocational secondary schools consisted of five grades: Grades 8 and 9 in the First Cycle and Grades 10, 11, and 12 in the Second Cycle. A competitive entrance examination was required for admission to grade 8.

Since the reorganization of the system of technical secondary education in 1973 the training time was shortened from five years to three years (that is, the First Cycle was abolished and instead of admitting students to grade 8 the school then admitted students to grade 10 and graduated them at the end of grade 12 as technicians). Parallel with that reform the Technical Baccalaureate I was abolished. Students of grade 11 continued their studies through grade 12 to prepare for the new Technical Baccalaureate (which was equivalent to the Technical Baccalaureate II in the old system).

The agricultural education branch of education. The agricultural education branch is comprised of two cycles:

- First Cycle - from grade 6 through grade 9,
- Second Cycle - from grade 10 through grade 12.

A competitive entrance examination to grade 6 was required. Since the reform in 1973 the agricultural secondary education was organized in the same way as the technical branch.

Unlike the other branches agricultural education did not have the Baccalaureate examination at the end of grade 12. Students of the 12th grade, if they met the course requirements, were granted the Agricultural Baccalaureate Diploma.

Comprehensive education. In an effort to improve education the MOCEY tried a new type of school which was called "comprehensive high school". There were eighteen pilot comprehensive high schools with a total of 60,000 students. These schools were organized in the same way as the American high school.

Higher Education

Higher education in the Republic of Vietnam consisted of junior colleges with two-year programs of instruction and universities with four to seven-year programs of instruction.

To be admitted to a college or university a student must have completed secondary education successfully (that is, the student must have passed the Bac II or Baccalaureate examination). Some colleges and universities required students to take and pass a competitive entrance examination for admission.

Junior colleges. Junior colleges include the community junior colleges and the technical junior colleges. Special two-year programs were established at these colleges to train intermediate level technicians for the local communities.

Universities. Universities provided four-year or longer programs of instruction according to different branches of education. Medicine and architecture were the two disciplines with seven-year programs of instruction. In terms of horizontal integration, higher education covered most of the fields of education including agriculture, dentistry, engineering, law, letters, pedagogy, pharmacy, science, teacher education, fine arts, and technical and vocational education.

Upon completion of the requirements at the various levels in fields of study the graduate received a licence (certificate), a DES (diploma), or a doctors (degree), the United States equivalent as shown:

Received Upon Graduation in Vietnam	United States Equivalent
License	B.A., B.S.
Diplime D'Etudes Superieures (DES)	M.A., M.S.
Doctor	Ph.D.

CURRICULUM CONTENT IN VIETNAMESE SCHOOLS

As stated previously curriculum requirements in elementary and secondary education were determined by the MOCEY. All schools at these levels, public or private, were supposed to comply strictly to the same curricula.

Elementary Education Curriculum

The elementary education curriculum was designed not only to provide the students with theoretical knowledge to enable them to pursue studies in secondary schools but also to train them in practical skills and relevant attitudes which promote their individual development as well as enable them to adapt to real life situations.

The curriculum is comprised of the following subjects and content:

a. Vietnamese
  - Alphabetization
  - Reading, writing
  - Dictation
  - Vocabulary
  - Composition (grades 4 and 5) short description of things, persons (portrait) and landscape

  - Short narration, easy dissertation, and letter writing

b. Mathematics

  - Numbers, counting, decimal numbers
  - Addition, subtraction, table of multiplication
  - Multiplication, division
  - Fraction
  - Perimeter and area of polygons (square, rectangle, triangle, parallelogram, losange, trapezoid), circumference of circle
  - Volume of rectangular prism and cube
  - Metric system
  - Time, rate, distance

c. General knowledge (Social Studies)

  - Plants, animals, human body
  - Tropical, epidemic, and contagious diseases
  - Geography of Vietnam
  - Geography of the world
  - History of Vietnam
  - History of the world
  - Duties of a citizen

d. Arts

  - Drawing, music for boys
  - Sewing, music for girls

Principles Underlying the Revision of the Elementary Education Curriculum

Reprinted from: Elementary Education Curriculum; Dept. of National Education, Saigon, Vietnam, 1960.

I. Fundamental principles of education in Vietnam

A) Education in Vietnam must be a humanist education, respecting the sacred character of the human being, regarding man as an end in himself, and aiming at the full development of man.

B) Education in Vietnam must be a national education, respecting the traditional values, assuring the continuity of man with his natural environment (his family, profession and country), aiming at safeguarding the nation, its prosperity and the collective promotion of its people.

C) Education in Vietnam must be an open education, respecting the scientific mind as a factor of progress, attempting to develop the social and democratic spirit, and welcoming all the authentic cultural values of the world.

II. Characteristics of Elementary Education in Vietnam

Based on the three fundamental principles of education in Vietnam, elementary education must have the following characteristics:

A) It respects the personality of the child. Educators should:

1) Help the child to develop harmoniously and fully according to his nature and the natural laws governing physical and psychological growth.

2) Take into consideration the individuality and the particular abilities of the child.

3) Practice extensively discipline by self-criticism.

4) Avoid all punishment that may effect the child's personality negatively.

B) It develops the national spirit.

1) Take as objects of study the common people's way of life as well as the social situation of the country.

2) Use national history to teach the children to love the country, to praise the fighting spirit of the people, to love one another and to stay united.

3) Use the Vietnamese language as the efficient means to develop national ideals.

4) Teach the children to appreciate the beauty of the Vietnamese landscape, the abundant natural resources of the country, and the traditional qualities of the people.

5) Preserve the traditional principles and the good customs of the nation.

6) Develop self-confidence, self-sufficiency and self-reliance.

C) It fosters the democratic and scientific spirit.

1) Promote the organization of "self-governed" groups, develop the spirit of community (collective play and work) and collective consciousness.

2) Develop judgement, sense of responsibility and discipline.

3) Stimulate the child's curiosity and develop his scientific spirit.

4) Eliminate supersitions.

5) Welcome all foreign cultural values while developing at the same time the national spirit.

NUMBER OF HOURS PER WEEK OF INSTRUCTION IN ELEMENTARY EDUCATION BY GRADE AND SUBJECT

SUBJECT	Grade 1 *	Grade 2	Grade 3	Grade 4	Grade 5
1. Vietnamese Language					
a. Vocabulary & Reading	5.5	3.6	3.6	3.75	3.75
b. Recitation	1	1	1.5	.50	.50
c. Penmanship	2.5	1	1	.50	.50
d. Dictation/Grammar	.50	1.33	1.5	1.75	1.75
e. Composition		1.50	1.50	1.50	1.50
2. Moral Ed & Civics	2.12	2.12	2.60	2.50	2.50
3. History			1	1	1
4. Geography			1	1	1
5. Math	2.5	3	3	3.90	3.90
6. Drawing	1.60	.90	.90	.90	.90
7. Home Ec **				1.90	1.90
8. Activities	1	1	2	2	2
9. Science	2.50	2.50	2.50	2.50	2.50
10. Phys Ed	1.60	1.60	1.60	2	2
11. Child Care **				.50	.50[1]

[1] * For a long time, the Vietnamese system, like the French, named the classes in descending order. Thus, a child entered the 5th grade at age 6 and finished primary education in Grade 1 at about age 11. However, in recent years this has been changed to a system of names more correspondent with the American system.

From: A Manual For Indochinese Refugee Education 1976-77. The National Indochinese Clearinghouse, Center for Applied Linguistics, Arlington, Virginia. Prepared for Department of Health, Education and Welfare, United States Repatriate and Rfugee Staff. Pages 140-142.

** Girls only

Secondary Education Curricula

Curricula in secondary education provides for basic first cycle work and second cycle work in the various tracks (A,B,C,D) as well as for technical, agricultural, and comprehensive education.

Secondary First Cycle Curriculum

The secondary first cycle curriculum, being broadly general education based, consists of the following (hours per week of each subject are shown in Table 1, page 19):

a. Vietnamese
  - Grammar
  - Dictation
  - Reading, modern literature (prose), classical literature (poetries)
  - Writing, moral essay and short literary essay

b. Foreign language (students choose between English and French)
  (1) English - use English for Today as textbook, Book I to Book III
  (2) French - use Civilisation Francaise as textbook, Tome I: Le Francais Elementaire

TABLE I.1 HOURS PER WEEK OF EACH SUBJECT BY GRADES, SECTIONS

GRADES, SECTIONS / SUBJECTS	Vietnamese	Philosophy	Mathematics	Physics-Chemistry	Natural Science	Ist Foreign Lan.	2nd Foreign Lan.	Classical studies	History-Geography	Civic Instruction	Total hours
Grades 6,7	6	0	3	2	I½	6	0	0	3	I	22½
Grades 8,9	6	0	4	2½	I½	5	0	0	3	2	24½
Sec.A, GradesI0,II	3	0	4	4½	3	4	4	0	3	2	27½
......Grade I2	0	4	5	7	4	3	3	0	3	I	30
Sec.B, GradesI0,II	3	0	6	4½	I	4	4	0	3	2	27½
......Grade I2	0	3	9	7	I	3	3	0	3	I	30
Sec.C, GradesI0,II	6	0	I	I	I	6	6	6	3	2	26
......Grade I2	0	9	I	I	I	6	6	6	3	I	28
Sec.D, GradesI0,II	6	0	I	I	I	6	0	6	3	2	26
......Grade I2	0	9	I	I	I	6	0	6	3	I	28

Table 1.2

PRESENT REGULAR 1ST CYCLE OF SECONDARY SCHOOL CURRICULUM

(Hours/Week)

SUBJECT	GRADE				TOTAL HOURS
	6	7	8	9	
Vietnamese	6	6	6	6	24
History - (1)	1.5	1.5	1.5	1.5	6
Geography	1.5	1.5	1.5	1.5	6
Civics	1	1	1	2	5
Modern Language	6	6	5	5	22
Mathematics	3	3	3.5	3.5	13
Natural Science	1	1.5	1.5	2	6
Physics	1	1	1.5	1.5	5
Chemistry	1	1	1	1	4
TOTAL	22	22.5	22.5	24	91
Physical Education, gymnastics, youth activities	3	3	3	3	12
Handicraft (boys) (2)	1	1	1	1	4
Home Economics (girls) (3)	1	1	1	1	4
Music	1	1	1	1	4
TOTAL	28	28.5	28.5	30	115

NOTES: (1) History and geography are given a total of 3 hours/week for each year, with 1½ hours indicated for each.

(2) Separate courses are described -- handicrafts, carpentry, metalworking, and electrical.

(3) Courses are sewing, child care, and cooking.[1]

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[1] Ibid., page 143.

c. Physics and chemistry

(1) Physics

- Weight, balance
- Pressure, Archimedes principle
- Temperature, heat
- Electricity
- Optical

(2) Chemistry

- $H_2 0$
- Oxygen and oxydation
- Hydrogen and the air
- Acid and bases
- The metals
- Organic chemistry

d. Natural science

- Living things
- The plants (botany)
- The animals (zoology)
- The earth, rocks (geology)
- Human body (anatomy and physiology)

e. Mathematics

- Arithmetic, decimal fractions, proportion
- Algebra, inequalities, first degree equations, functions and graphs ($y = ax$ and $y = ax + b$),

second degree equations, functions and graphs
($y = x^2$; $y = ax^2$; $y = \frac{1}{x}$; $y = \frac{a}{x}$)

- Geometry, straight line, segments
  Circle: arcs, angles, right angles
  Triangles: congruency of triangles, similarities, bissectrice, mediatrice, symmetry, parallel
  Polygons: quadrilateral, parallelogram, trapezoid, rectangle, lozenge, square
  Solid geometry: parallel planes, prisms, cones, spheres

f. History and Geography

(1) History of Vietnam from the beginning through 1945

(2) History of the world
  - Development of industries in Europe and the expansion of colonialism
  - Asian countries before the colonialism (China, India, Japan)
  - First World War, the world between the two World Wars

(3) Geography
  - Earth
  - Europe, Africa, America, Asia (without Vietnam), Australia
  - Vietnam

g. Civics instruction
  - Individual and family
  - Organizations in a school, duties of students
  - Social life and religion
  - Rights and duties of a citizen

h. Options
  (1) Drawing, music for boys
  (2) Sewing, cooking, music for girls

Secondary Second Cycle Curriculum

Curricula in the secondary second cycle generally embraces grades 10 through 12 following the four tracks as outlined on page . Generally these curricula include the hours per week of each subject as shown in Table 1, page 19.

Prior to 1973-74 Vietnamese was offered in grades 10 and 11 only. The 12th grade students had to study philosophy instead of Vietnamese. Since the instructional reform in 1973-74 both Vietnamese and philosophy were offered in grade 12. The following subjects and subject content comprise the secondary second cycle curriculum.

a. Vietnamese
  (1) Literature, from the beginning to 1945
    - Oral literature (popular literature)
    - Classical literature (written in Chinese-Vietnamese characters)

Table 1.3

SECOND-CYCLE SECONDARY SCHOOL CURRICULUM

(Hours/Week)

(Sections: A - Experimental Sciences, B - Mathematics, C - Modern Languages, D - Classical Languages)

REQUIRED SUBJECTS	GRADE			REQUIRED HOURS IN SECTIONS	TOTAL HOURS
	10	11	12		
Vietnamese	3	4	0 (2)	A + B	7 (9)
	5	6	0 (3)	C + D	11 (14)
History - Geography	3	3	3 (2)	A + B	9 (8)
	3	3	3	C + D	9
Civics	2	2	1	A, B, C, D	5
Philosophy	0	0	3	B	3
	0	0	4	A	4
	0	0	9 (8)	C + D	9 (8)
Modern Language I	4	4	3	A + B	11
	6	6	6	C + D	18
Modern Language II	0	0	0	D	0
	4	4	3	A + B	11
	6	6	6 (4)	C	18 (16)
Classical Language	0	0	0	A, B, C	0
	6	6	6 (4)	D	18 (16)
Physics	½	½	½	C + D	1½
	3	3	5	A + B	11
Chemistry	½	½	½	C + D	1½
	1½	1½	2	A + B	5
Mathematics	1	1	1	C + D	3
	4	4	5 (4)	A	13 (12)
	6	6	9 (8)	B	21 (20)
Natural Science	1	1	1	B, C, D	3
	3	3	4	A	10
TOTAL (Minimum-Maximum)	25-27½	26-28½	28-30		79-86
ELECTIVES Boys	2	2	2		6
Girls	3	3	3		9

The numbers in parentheses represent changes effective in 1974-75 as the result of a new requirement for Vietnamese in Grade 12.[1]

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[1] Ibid., page 144.

- modern literature (written in Romanized Vietnamese)

(2) Authors and masterpieces

- 15 authors and masterpieces for sections A and B
- 20 authors and masterpieces for sections C and D

(3) Composition

- Literary dissertation

b. Philosophy

(1) Morale (for all sections)

- Morale and sciences
- Moral conscience
- Duty
- Responsibility
- Right
- Justice and charity

(2) Logic (for all sections)

- Principles of reasoning
- Intuition and Reasoning
- Analysis and synthesis
- Scientific spirit
- Methods in mathematics and sciences

- (3) Psychology (for sections A, C, and D)
    - Psychology and physiology relationship
    - Psychology and sociology relationship
    - Affective domain
    - Psychomotor domain
    - Cognitive domain (for sections C and D)
- (4) Metaphysics (for sections C and D)
    - Metaphysics and sciences
    - Metaphysics and religion
    - Reality
    - Spirit
    - Freedom
    - God

c. Civics

- (1) The nation
    - People
    - Territory
    - Government
    - Independence
    - Constitution
    - Legislative
    - Executive
    - Judicial

- (2) United Nations
    - Organization
    - UNESCO
    - Other organizations
- (3) Human relations
- (4) Customs
- (5) Juvenile delinquency
- (6) Economy
    - Different theories
    - Production
    - Commerce
    - Money
    - Banking
- (7) Politics (for all sections)
    - Democracy
    - Political parties
    - Governmental regimes
    - Dictatorship
    - Facism
    - Communism

d. History

- (1) History of Vietnam from 1407 through 1945
- (2) History of the world from end of 18th century to 1945
    - United States

- United Kingdom
- French expansion of colonialism
- Asian countries before the colonialism
- Japan
- China
- India
- World War I
- World War II

e. Geography (for all sections)

(1) Geography of the earth

- Revolution of the earth
- Cartography
- Geological formation
- Physical geography
- Climate
- Animals and plants
- Human geography
- Economical geography

(2) Geography of Vietnam

(3) Geography of the world

- United States
- West Germany
- England
- Japan

- U.S.S.R.
- Republic Democratic of China
- India

f. First foreign language

(1) English

- English for Today used as textbook
- Books III and IV (sections A and B)
- Books IV and V (sections C and D)

(2) French

- Cours de Langue et de civilisation franciase used as textbook
- Tome II (sections A and B)
- Tome II plus the following authors: La Fontaine, A. Daudet, A. France, St. Exupery, G. Duhamel (sections C and D)

g. Second foreign language (Students in section D had to take classical literature (Chinese or Latin) instead of second foreign language.)

(1) English

- English for Today used as textbook
- Books I and II (sections A and B)
- Books I, II, and III (section C)

(2) French

- Cours de Langue et de civilisation francise used as textbook

  - Tome I (sections A and B)
  - Tome I and II (section C)

h. Mathematics (More details and difficulties for section B. More general in section A. A great restriction of the curriculum for sections C and D leading to advanced work in law and letters.)

  (1) Algebra
    - Second degree equations and inequalities
    - Logarithm
    - Derivation
    - Function $\frac{ax^2+bx+c}{a'x^2+b'x+c}$

  (2) Geometry
    - Analytical geometry

  (3) Motion
    - Vector
    - Speed
    - Rectilinear motion

      (equation $x=a. \cos(wt+\phi) + b.\cos(xt+\phi)$)

  (4) Trigonometry - equations
    - $\sin x = \sin a$, $\cos x = \cos a$, $tg\ x = tg\ a$

      $a \cos x + b \sin x = c$

  (5) Statistics and probability

i. Natural science (More details and lab work for section A. Some restriction without lab work for section B, C, and D.)

(1) Geology
  - The earth in the universe
  - Hypothesis of Weigoeeker
  - Geological phenomena
  - Rocks
  - History of the earth

(2) Botany
  - Generalities
  - Classification of plants
  - Cell physiology
  - Different parts of a plant
  - Nutrition
  - Environment
  - Genetic

(3) Anatomy and physiology (of animals)
  - Generalities
  - Cell physiology
  - Nutrition
  - Activities
  - Genetic

j. Physics and chemistry (Sections A and B. Great restrictions for sections C and D.)

(1) Physics

- Energy
- Static
- Heat
- Optical
- Mirror
- Prism
- Lenses
- Eyes
- Magnify
- Microscope
- Electricity and electromagnetism
- Power
- Motion
- Waves

(2) Chemistry

- Atom
- Molecule
- Ion
- Acids
- Bases
- Oxyd
- Chlorur
- Hydrogen
- Hypoclorit

- Clorat
- Nitrogen
- Electrolyse
- Metals
- Organic chemistry

Technical and Agricultural Secondary Education Curriculum

Technical and vocational secondary schools aimed at providing technicians through a three-year program of instruction. A student was admitted to the first year of technical school after having completed the first cycle of general secondary education and passing an entrance examination.

Technical secondary schools offered courses in mechanics, electricity, electronics, building and woodwork, metal work, forging, and welding.

Like the technical and vocational secondary schools, the agricultural secondary schools aimed at providing technicians through a three-year program of instruction. To be admitted to the first year of agricultural school the student was required to complete the first cycle of the general secondary education and pass the entrance examination.

Agricultural secondary education consisted of agriculture, forestry, and animal husbandry.[1]

The comprehensive secondary school curriculum included both general and vocational education. General education gave each student a good background in language, science, social studies, mathematics, and science. It covered most of the first cycle of the general secondary education and a great part of the section A of the general secondary education second cycle. Vocational education prepared students to work in a specific vocation. It included business education (bookkeeping, typewriting, general business), agriculture (general agriculture education), home economics (food study, clothing, home care), and industrial arts (drawing, woodworking, metalworking, mechanics, electricity, and electronics).[2]

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[1] The detailed and complete curriculum of the technical and agricultural education is not at hand.

[2] The detailed curriculum of the comprehensive secondary curriculum is not available.

GRADING AND EVALUATION OF STUDENT ACHIEVEMENT IN VIETNAMESE SCHOOLS

The Grading System

The responsibility for all aspects of all national examinations in Vietnam rests with the Minister of Culture, Education, and Youth. Under the supervision of the Minister is an office called the Directorate of Examinations. The Directorate of Examinations is responsible for the development, administration, scoring, and reporting of all national examinations. These include:

The Baccalaureate I,
The Baccalaureate II,
The Adult First Cycle Examination, and
The Sixth Grade Competitive Entrance Examination.

Since the reorganization of the educational system in 1973 the Bacc I has been abolished and the Sixth Grade Competitive Entrance Examination has been delegated to the Provincial Service of Education. Other examinations, that is first and second semester examinations for all grades, are organized and administered by each school. The distinction between national examinations and local examinations is in the scope, in fact, the philosophy, the principles, and the methods are the same.

The most important national examination is the Bacc II. For more than twenty years Vietnamese students who completed the twelfth grade (final grade) in high school have been required to pass a national examination in order to be eligible for the Bacc II Certificate. This Certificate is the official recognition that the student has made satisfactory academic achievement during his study in high school. Without it his years of schooling are not recognized. The examination has been deemed necessary in order to assure competency in a common body of knowledge among all Vietnamese high school graduates. The Bacc II examination is organized nation wide and administered twice each year. The first administering, called First Session, is during the last week of June; and the second time, called Second Session, is during the last week of August. Like the French Baccalaureate, the Bacc II consists of a series of essay type examinations (except one). The subjects covered in the examination are presented in Table 2.1, page 35 with indication of the length of time the student is given to write on each subject. Because the subjects studied by twelfth graders are not of equal importance in the curriculum, the examination gives a parallel discriminating value to each subject in two ways. The first way is to make a time allocation for each subject; the second way is to weight some subjects more heavily

TABLE 2.1 LENGTH AND WEIGHT OF EACH SUBJECT OF THE BAC.II EXAMINATION BY SECTION

	SECTION A		SECTION B		SECTION C		SECTION D	
	HOURS	WEIGHT	HOURS	WEIGHT	HOURS	WEIGHT	HOURS	WEIGHT
PHILOSOPHY	3	2	2	2	4	4	4	4
NATURAL SCI.	3	4	1	1	1	1	1	1
PHYS.CHEM.	3	4	3	4	1	1	1	1
MATHEMATICS	2	2	3	5	1	1	1	1
1ST FOR.LANG.	2	2	2	2	3	3	0	0
2ND FOR.LANG.	1	1	1	1	2	2	0	0
CLASSICAL LIT.	0	0	0	0	0	0	2	2
MODERN LIT.	0	0	0	0	0	0	3	3
HIS.GEO.CIV.	1.5	3	1.5	3	1.5	3	1.5	3
TOTAL	15.5	18	13.5	18	13.5	15	13.5	15

than others. In the latter way the discriminating values that are assigned to each subject are called weight.

Scores Scale

The grading system long used in Vietnamese education is based on a $\frac{0}{20}$ to $\frac{20}{20}$ scale. (Range from $\frac{0}{20}$ to $\frac{20}{20}$.) The middle point of the scale ($\frac{10}{20}$) represents the average score. The scoring of student papers has long been based on that scale.

Total weighted scores and average standard score

Each subject's score is multiplied by the weight given to it. For example, Student Toai, Section C, has $\frac{15}{20}$ in philosophy; the weighted score of that subject is 15 X 4 = 60. The total weighted score is the sum of all subject weighted scores (Table 2.1). For example, Student Toai, section C:

Subjects	Subject Scores	Weight	Subject Weighted Scores
Civics	12	1	12
Philosophy	15	4	60
Natural Sciences	9	1	9
Mathematics	15	1	15
Hist.-Geography	13	2	26
Foreign Lang. I	11	3	33
Foreign Lang. II	13	2	26
Physics-Chemistry	10	1	10
		15	191 Total Weighted Score

The average standard score is the result of the division of total weighted scores by the total number of weights. In the above example the average standard score is $\frac{191}{15} = 12.73$. The average standard score is the crucial score in the examination. It is the basis for determining which students will pass, which will fail, and which will receive special recognition.

Cutting scores

A cutting score is one that is selected to divide groups of students into categories. If score X is a cutting score, then all who score above that point will be considered to be in one category and those who score below that point will be in another category. All cutting scores on the Baccalaureate examination are based on the average standard score. The most important cutting score on the Baccalaureate examination is the pass-fail point. Students with scores above this point are eligible for the Baccalaureate Certificate; those scoring below this point are considered to have failed the examination. The cutting point that is decided upon as the pass-fail score is the average standard score of 9.00.

Next, decisions have to be made about the cutting point that will establish the grades of those who pass the examination. There are five passing grades ranging from a low of pass to a high of honors. The cutting scores adopted are as follows:

18 - 20	Honors
16 - 18	Excellent
14 - 16	Very Good
12 - 14	Good
9 - 12	Pass

This same pattern of weights and cutting scores has become a tradition in Vietnamese schools for computing overall grade-point averages for students, for computing their class rank, and for otherwise evaluating overall high school achievement.

COMPARATIVE STRUCTURE OF SCHOOL SYSTEMS IN SOUTHEAST ASIA AND THE UNITED STATES

The comparison of school systems in Southeast Asia with those in the United States is herein made primarily in terms of educational structure, alignment, and student age. Although educational divisions, schooling agencies, grade levels, and general programs are outlined, no effort has been made in this document to delineate fully a comparison of educational philosophies, objectives, and curricula content.

It is hoped that this comparative presentation will enable administrators, teachers, and other educators to interpret better the educational information about the background of Southeast Asian students and transpose it into appropriate equivalencies in American schools.

Organizational Structures of Educational Systems in Southeast Asia

The system of education in Cambodia and Laos is very similar to that of South Vietnam which has been previously described. In terms of organization, curricula, examinations, and terminology the educational systems in Indochina are modeled after the French educational pattern.

Vietnamese educational programs and structure of school systems

The components of the Vietnamese education system are described in Chapter II. In Figure 5.1 a comparative structure is shown of the age, grade, educational level, and curricula of the Vietnamese, Laotian, and Cambodian educational systems with the age and grade in the United States. A further comparison of grade levels in United States' schools and those in Vietnam is made in Figure 5.2.

Educational systems in Cambodia and Laos

It is important to take special note of the comparison of the Cambodian and Laotian educational systems with that of South Vietnam and the United States. Even though the educational systems of the three countries in Indochina are modeled after the French pattern and operate similarly they are different in the number of schooling years in the elementary level and the vehicle language used in the schools. In the Vietnamese programs the Vietnamese language has replaced entirely the French language since 1954. It is the vehicle language and while French is taught in secondary schools it is only as a foreign language. This is not true in the case of the Cambodian and Laotian programs. In these countries the secondary and higher educational programs still use French as a vehicle language. From this fact French language must be introduced earlier in the second cycle of the elementary level to prepare the students for the higher levels where French term-

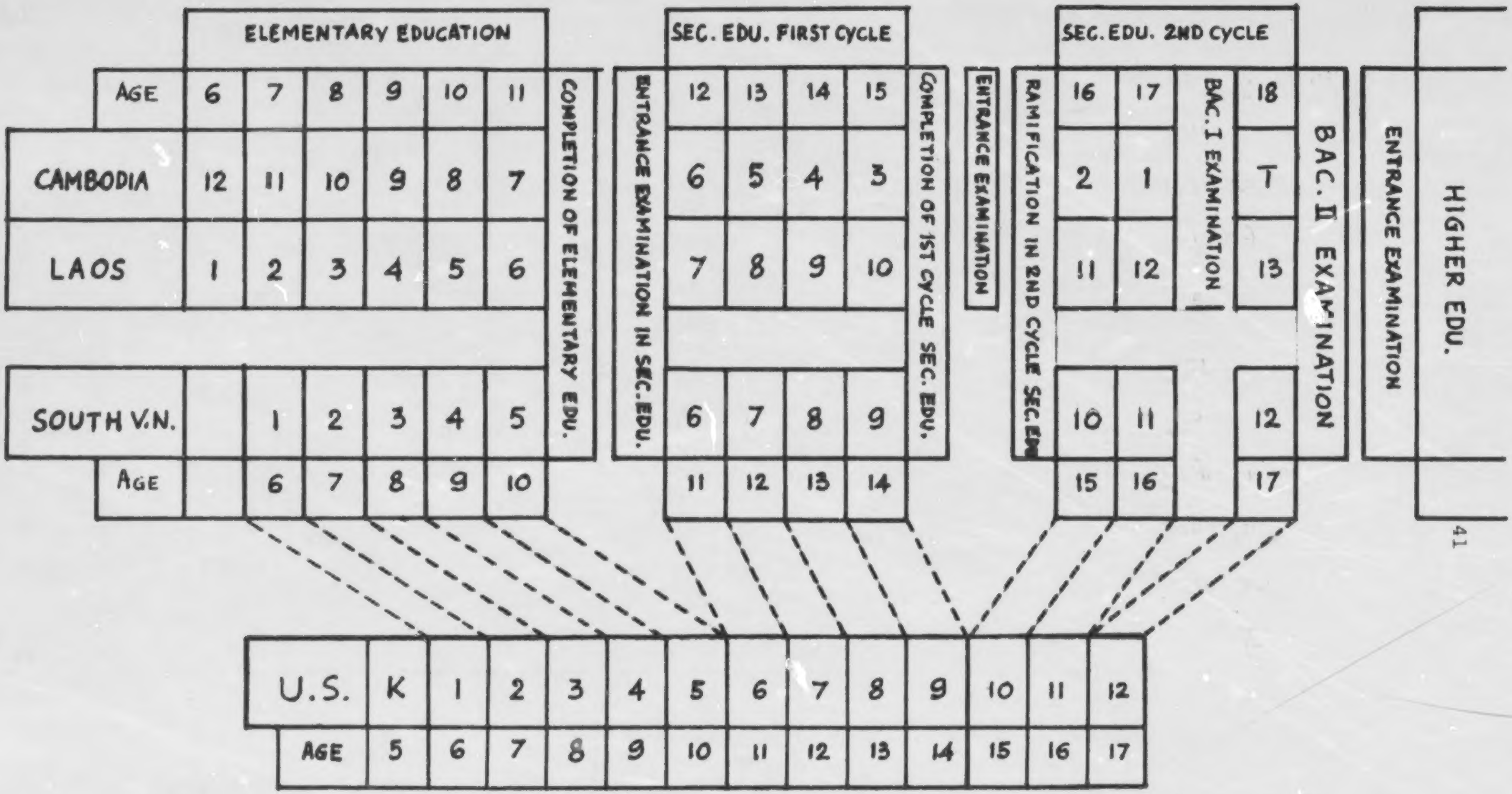

ELEMENTARY EDUCATION
SEC. EDU. FIRST CYCLE
SEC. EDU. 2ND CYCLE
HIGHER EDU.
AGE 6 7 8 9 10 11 12 13 14 15 16 17 18
CAMBODIA 12 11 10 9 8 7 6 5 4 3 2 1 T
LAOS 1 2 3 4 5 6 7 8 9 10 11 12 13
SOUTH V.N. 1 2 3 4 5 6 7 8 9 10 11 12
AGE 6 7 8 9 10 11 12 13 14 15 16 17
COMPLETION OF ELEMENTARY EDU.
ENTRANCE EXAMINATION IN SEC. EDU.
COMPLETION OF 1ST CYCLE SEC. EDU.
ENTRANCE EXAMINATION
RAMIFICATION IN 2ND CYCLE SEC. EDU.
BAC. I EXAMINATION
BAC. II EXAMINATION
ENTRANCE EXAMINATION
U.S. K 1 2 3 4 5 6 7 8 9 10 11 12
AGE 5 6 7 8 9 10 11 12 13 14 15 16 17

Figure 5.1. Comparative Structure of Educational Systems of Cambodia, Laos, South Vietnam, and the United States in Terms of Age and Grade

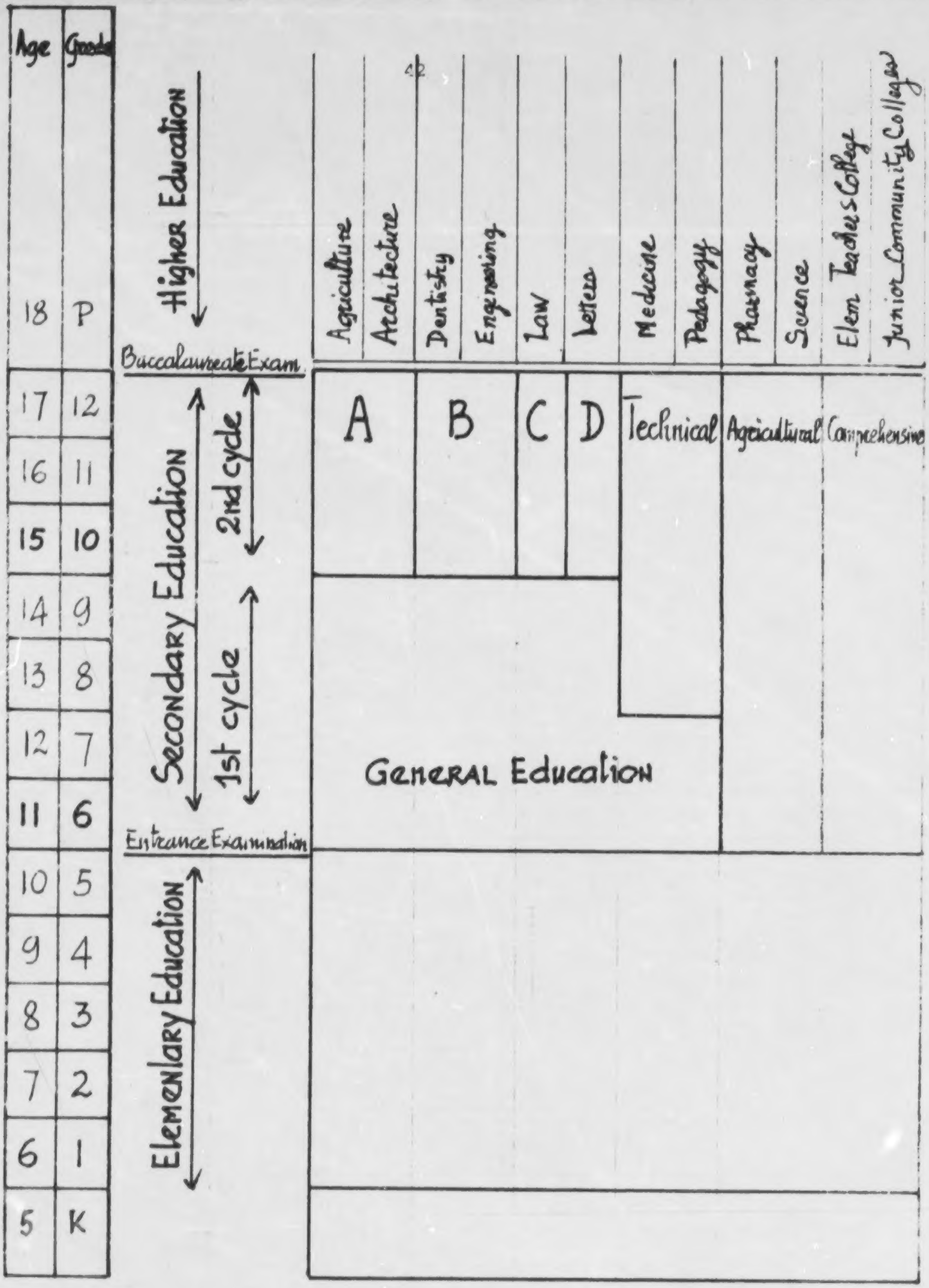

Age
Grade
18
P
17
12
16
11
15
10
14
9
13
8
12
7
11
6
10
5
9
4
8
3
7
2
6
1
5
K
Higher Education
Baccalaureate Exam
Secondary Education
2nd cycle
1st cycle
Entrance Examination
Elementary Education
Agriculture
Architecture
Dentistry
Engineering
Law
Letters
Medicine
Pedagogy
Pharmacy
Science
Elem Teachers College
Junior Community College
A
B
C
D
Technical
Agricultural
Comprehensive
GENERAL Education

Figure 5.1a

Components of Vietnamese Educational System

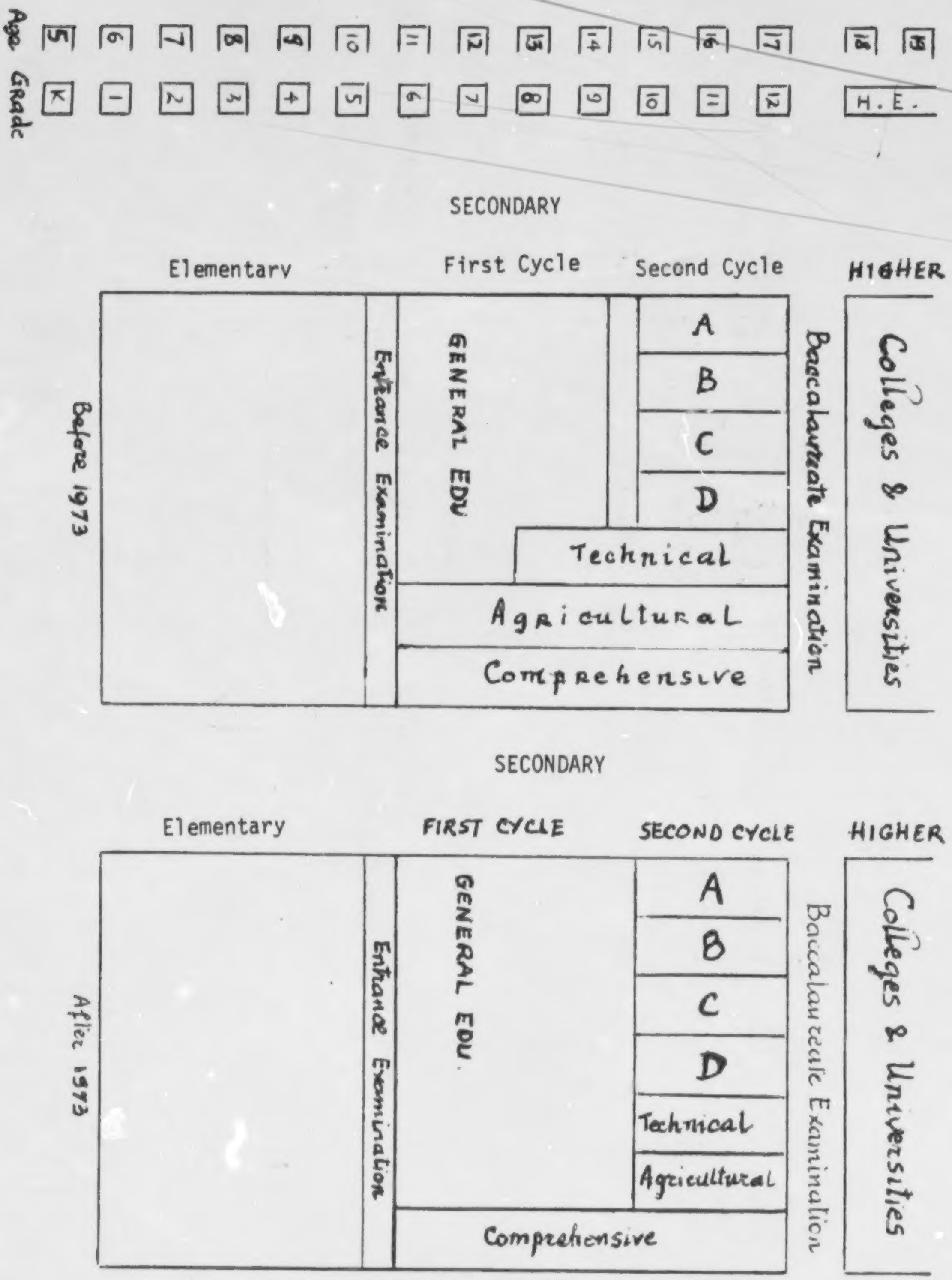
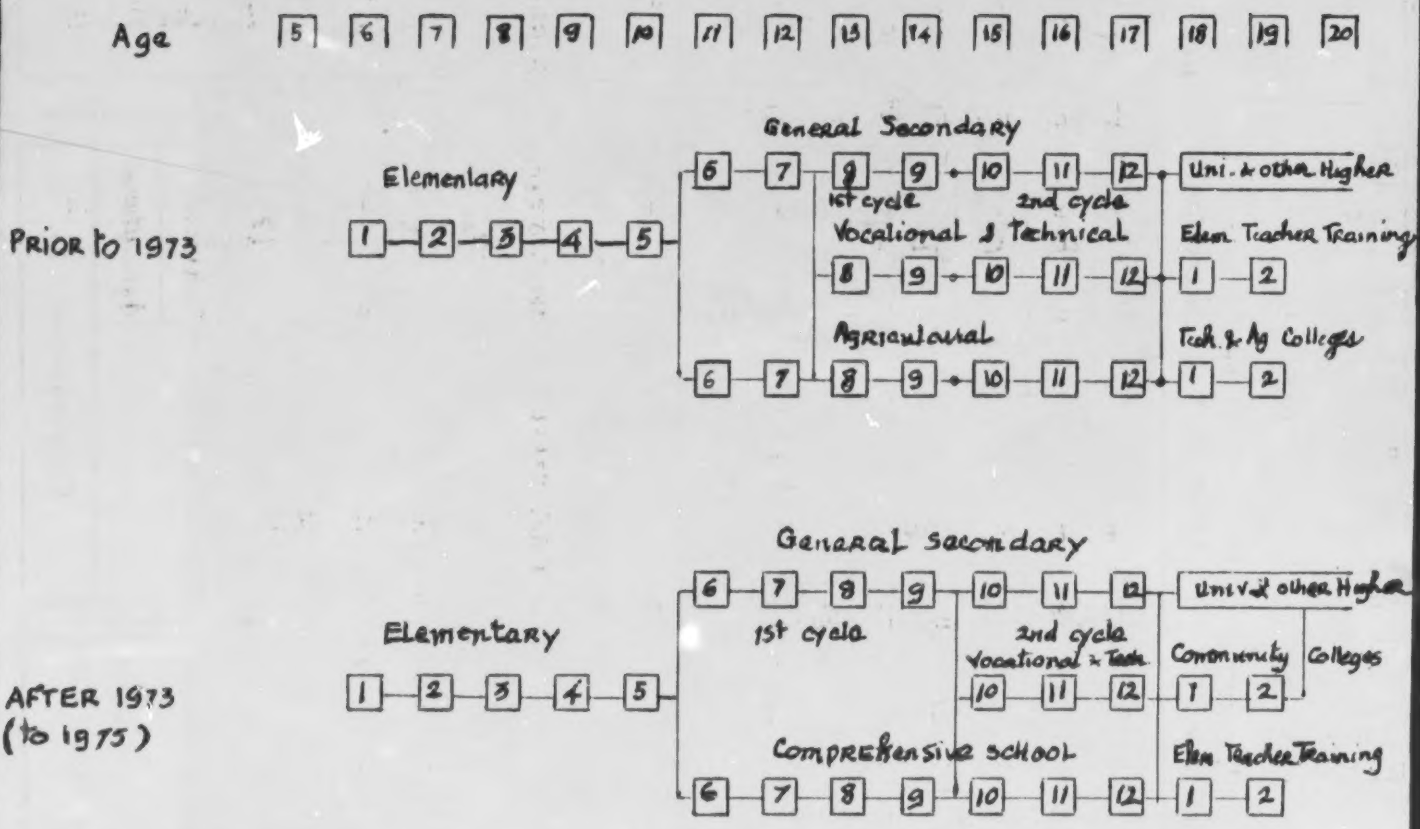

Age
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
Grade
K
1
2
3
4
5
6
7
8
9
10
11
12
H.E.
SECONDARY
Elementary
First Cycle
Second Cycle
HIGHER
Before 1973
Entrance Examination
GENERAL EDU
A
B
C
D
Technical
Agricultural
Comprehensive
Baccalaureate Examination
Colleges & Universities
SECONDARY
Elementary
FIRST CYCLE
SECOND CYCLE
HIGHER
After 1973
Entrance Examination
GENERAL EDU.
A
B
C
D
Technical
Agricultural
Comprehensive
Baccalaureate Examination
Colleges & Universities

Figure 5.1b

Components of Vietnamese Educational Systems Before and After 1973


Age
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
PRIOR to 1973
Elementary
1
2
3
4
5
General Secondary
6
7
8
9
10
11
12
1st cycle
2nd cycle
Uni. & other Higher
Vocational & Technical
8
9
10
11
12
Elem. Teacher Training
1
2
Agricultural
6
7
8
9
10
11
12
Tech. & Ag Colleges
1
2
AFTER 1973
(to 1975)
Elementary
1
2
3
4
5
General secondary
6
7
8
9
10
11
12
Univ. & other Higher
1st cycle
2nd cycle
Vocational & Tech.
10
11
12
Community
Colleges
1
2
Comprehensive school
6
7
8
9
10
11
12
Elem Teacher Training
1
2

GRADE U.S. SCHOOLS	K	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AGE IN U.S. SCHOOLS	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Figure 5.2

Grade Comparison and Structure of U.S. Schools
and School Systems in South Vietnam after 1973

inologies still occupy a great part of the program. Another difference is the number of years of schooling in elementary education. The level of secondary work is the same for the three countries, with two cycles (first cycle four years and second cycle three years) and corresponding examinations (Bac I, Bac II). But instead of five years in elementary education as in South Vietnam, the Cambodian and Laotian systems have six years (of the old French colonial system). This makes the comparison of these systems with that of the U.S. a little more complicated. A more thorough comparison must be based on the different lines of fragmentation such as the distinction among each cycle for certification and entrance examinations into the next cycle. Based on this pattern of comparison., the picture is more representative in Figure 5.1.

An outline of the educational systems of Cambodia and Laos is shown in Figure 5.3. Administratively these systems are headed by the Ministry of National Education. The levels of education consist of primary education, secondary education, vocational education, and higher education.

Primary elementary education consists of two cycles which are three years each and is made up of many types of schools: such as district elementary schools (providing a six-year course), the village primary school (providing one, two, or three-year courses), and the rural centers of community education (providing the first years of elementary education). At the end of the sixth grade students are examined for the primary education

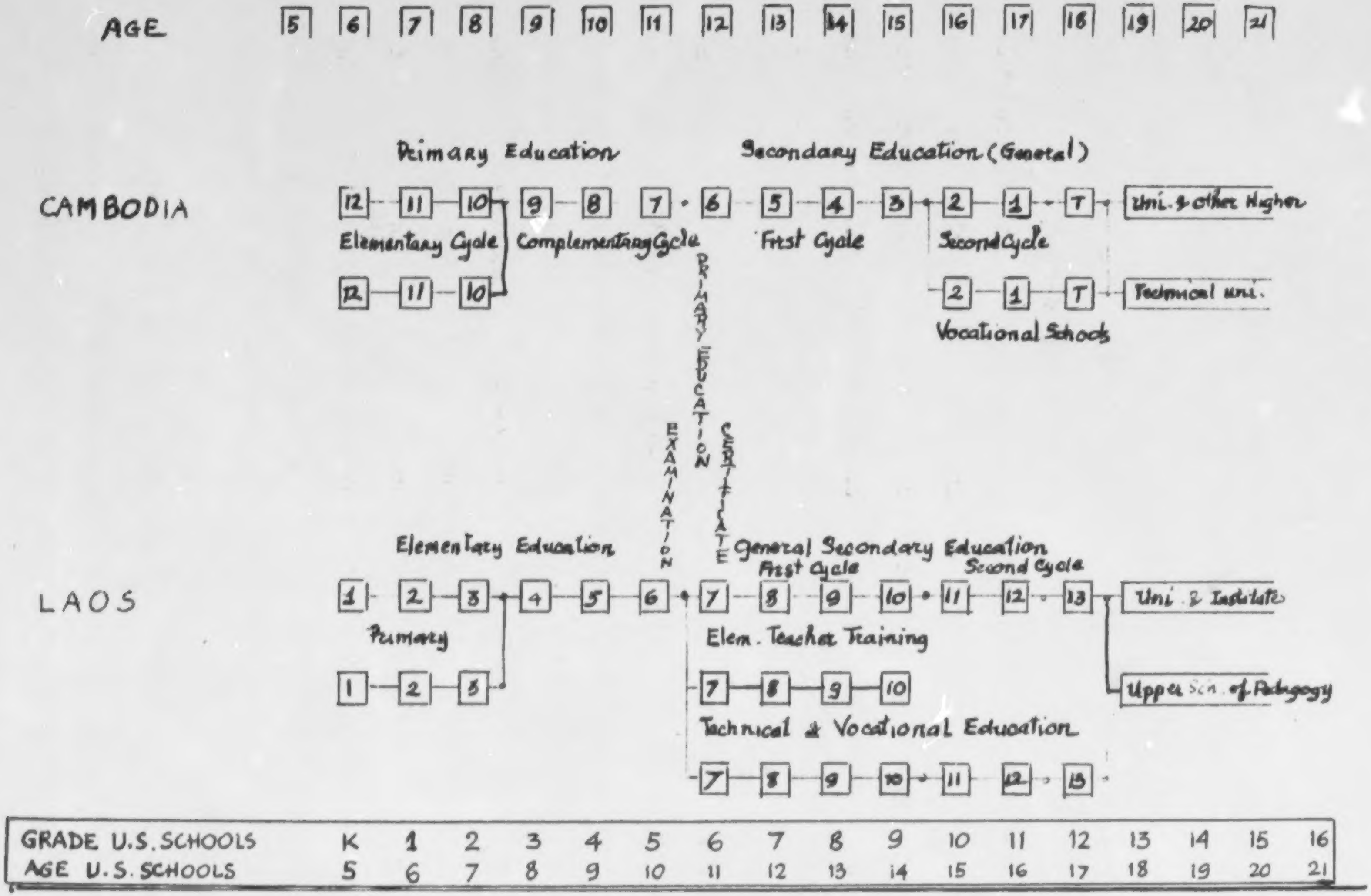

AGE
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
CAMBODIA
Primary Education
Secondary Education (General)
12 11 10 9 8 7 6 5 4 3 2 1 T
Uni. & other Higher
Elementary Cycle
Complementary Cycle
First Cycle
Second Cycle
12 11 10
2 1 T
Technical uni.
Vocational Schools
PRIMARY EDUCATION
EXAMINATION
CERTIFICATE
LAOS
Elementary Education
General Secondary Education
First Cycle
Second Cycle
1 2 3 4 5 6 7 8 9 10 11 12 13
Uni. & Institute
Primary
Elem. Teacher Training
1 2 3
7 8 9 10
Upper Sch. of Pedagogy
Technical & Vocational Education
7 8 9 10 11 12 13
GRADE U.S. SCHOOLS K 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
AGE U.S. SCHOOLS 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Figure 5.3

Age, Grade Comparison of School Systems of
Cambodia, Laos, and the United States

certificate.

School attendance, by law, is compulsory for children between the ages of six and fourteen. However, there is no penalty imposed on parents whose children do not attend school.

To be admitted into public secondary schools students must have the primary education certificate and pass the competitive entrance examination. Secondary education is also divided into two cycles: the first cycle(four years) and second cycle (three years). After four years of the first cycle the student must pass another qualifying examination for admission to the second cycle.

Vocational schools offer courses in mechanics, electricity, and woodwork. The standard for entry into vocational schools is the completion of the first cycle of general secondary education.

Higher education in Laos is comprised of the Higher School of Pedagogy, the Royal School of Medicine, and the Royal Institute of Law and Administration. Higher education in Cambodia is similar to that of South Vietnam and consists of the Schools of Letters, Science, Law, Medicine, Teacher Training (Pedagogy), and Engineering.

Typical age, grade structure of school systems in Indonesia, Malaysia, the Philippines, and Thailand

The general age-grade school structure of educational systems in Indonesia, Malaysia, the Philippines, and Thailand is outlined compared with grades in United States' schools in Figure 5.4.

In most of these school systems the steps of educational progress are set forth in the year of study at the stipulated school level in the division of education. For example, a child in Indonesia who is second year-lower general secondary is comparable to eighth grade or its equivalent in schools in the United States. The equivalent grade level for a student enrolled in second year-lower vocational and technical training would be the same.

In Figure 5.5 the Malaysian education system is further outlined in comparison with age, school year, and school level in the United States. Some indication of curriculum content and program expectations are also suggested.

A view of the educational system of Thailand is shown in Figure 5.6a. Figure 5.6b provides a more detailed overall perspective of education in Thailand as diagramed by William H. Strain. Combining the outlined structure of Thailand's educational system as shown in Figure 5.4 with those outlined in Figures 5.6a and 5.6b one is able to glean much about the educational background of a student.

Organization for Public Education in the United States

Public education in the United States is characterized by:

1. The absence of a centralized national authority for education such as a Secretary of Education equivalent to a Ministry of Education.
2. The right of each state (fifty school systems) to design and control the educational enterprise within its borders in accordance with the Constitution of the United States.

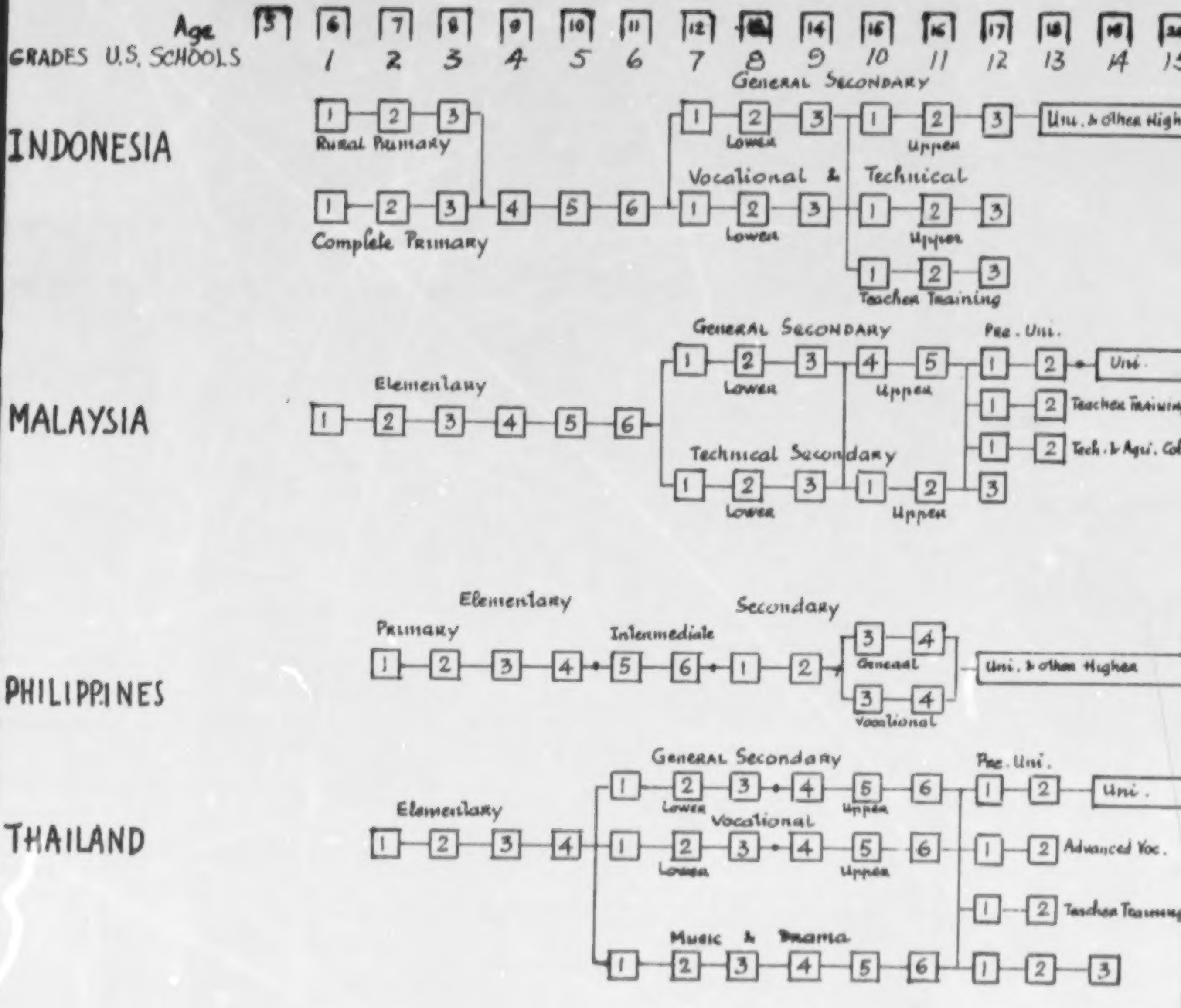
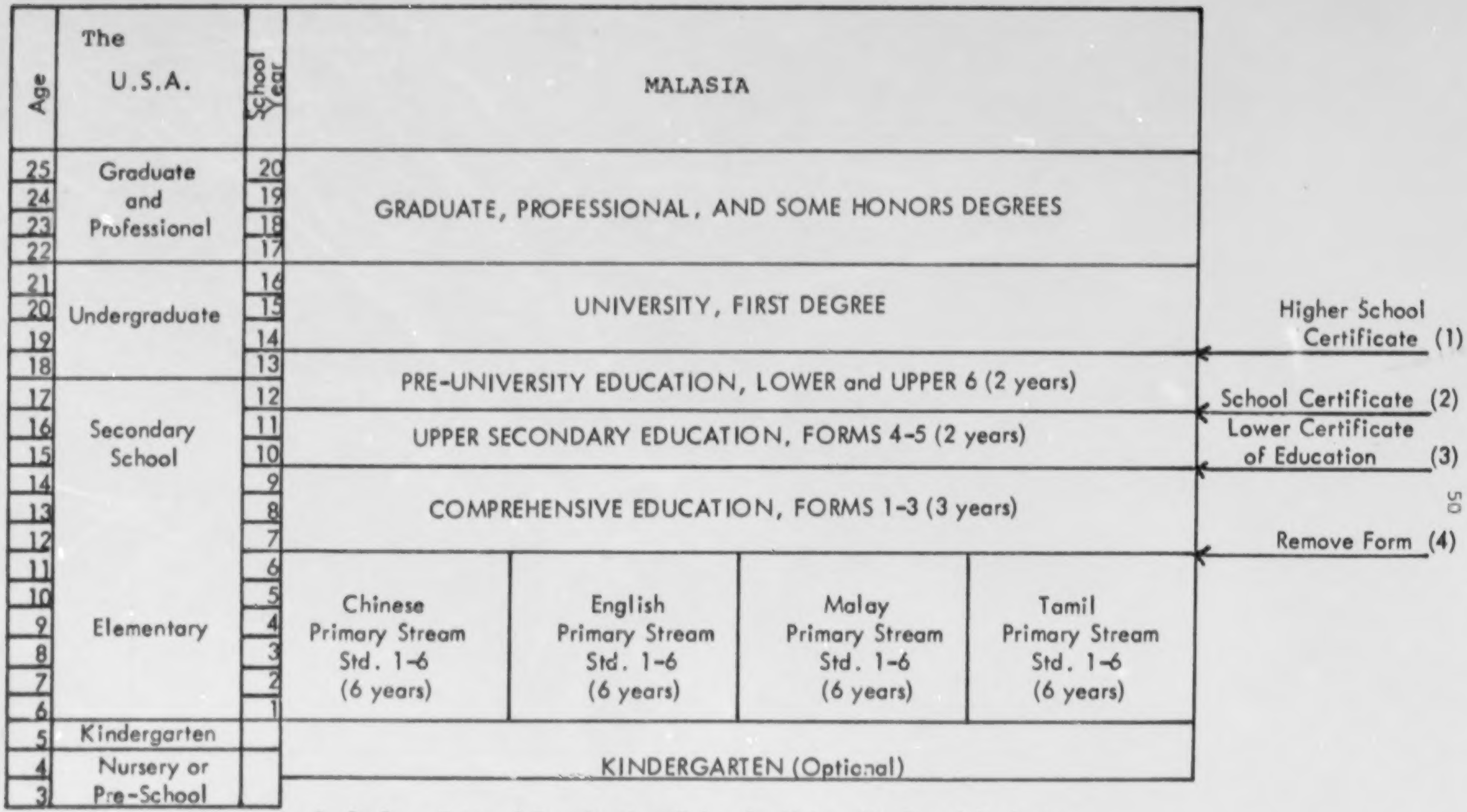

Age
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
GRADES U.S. SCHOOLS
1 2 3 4 5 6 7 8 9 10 11 12 13 14
INDONESIA
Rural Primary
Complete Primary
General Secondary
Lower
Upper
Uni. & other High
Vocational & Technical
Lower
Upper
Teacher Training
MALAYSIA
Elementary
General Secondary
Lower
Upper
Pre. Uni.
Uni.
Teacher Training
Tech. & Agri. Col
Technical Secondary
Lower
Upper
PHILIPPINES
Elementary
Primary
Intermediate
Secondary
General
Vocational
Uni. & other Higher
THAILAND
Elementary
General Secondary
Lower
Upper
Vocational
Lower
Upper
Pre. Uni.
Uni.
Advanced Voc.
Teacher Training
Music & Drama

Figure 5.4

General Comparison of Structure of School Systems in Indonesia, Malaysia, Philippines, Thailand, and the United States by Age and Grade


Age
The U.S.A.
School Year
MALASIA
25
24
23
22
Graduate and Professional
20
19
18
17
GRADUATE, PROFESSIONAL, AND SOME HONORS DEGREES
21
20
19
18
Undergraduate
16
15
14
13
UNIVERSITY, FIRST DEGREE
Higher School Certificate (1)
17
16
15
14
13
12
Secondary School
12
11
10
9
8
7
PRE-UNIVERSITY EDUCATION, LOWER and UPPER 6 (2 years)
School Certificate (2)
UPPER SECONDARY EDUCATION, FORMS 4-5 (2 years)
Lower Certificate of Education (3)
COMPREHENSIVE EDUCATION, FORMS 1-3 (3 years)
Remove Form (4)
11
10
9
8
7
6
Elementary
6
5
4
3
2
1
Chinese Primary Stream Std. 1-6 (6 years)
English Primary Stream Std. 1-6 (6 years)
Malay Primary Stream Std. 1-6 (6 years)
Tamil Primary Stream Std. 1-6 (6 years)
5
Kindergarten
4
3
Nursery or Pre-School
KINDERGARTEN (Optional)

1, 2, 3 - External Examinations Taken by University-Bound Students.
4 - Students Changing from One Language Stream to Another at the End of Standard 6 May Be Put in a Remove Class for One Year. There They Are Prepared for the Transition.

Figure 5.5

Malaysian Educational System

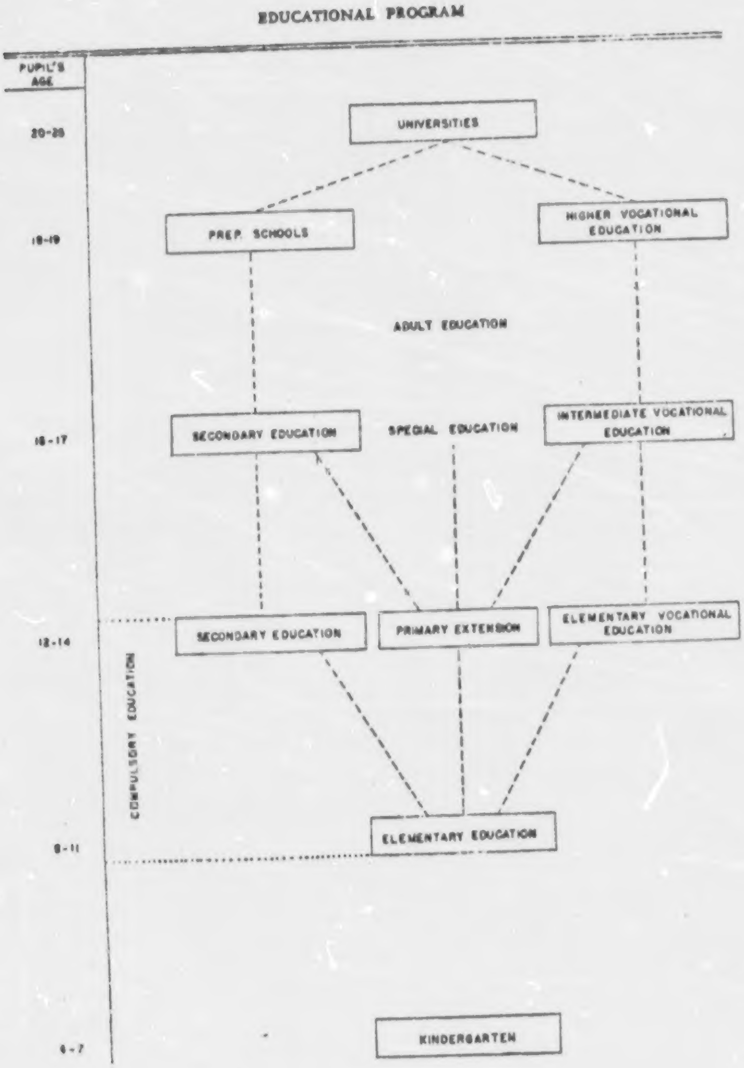
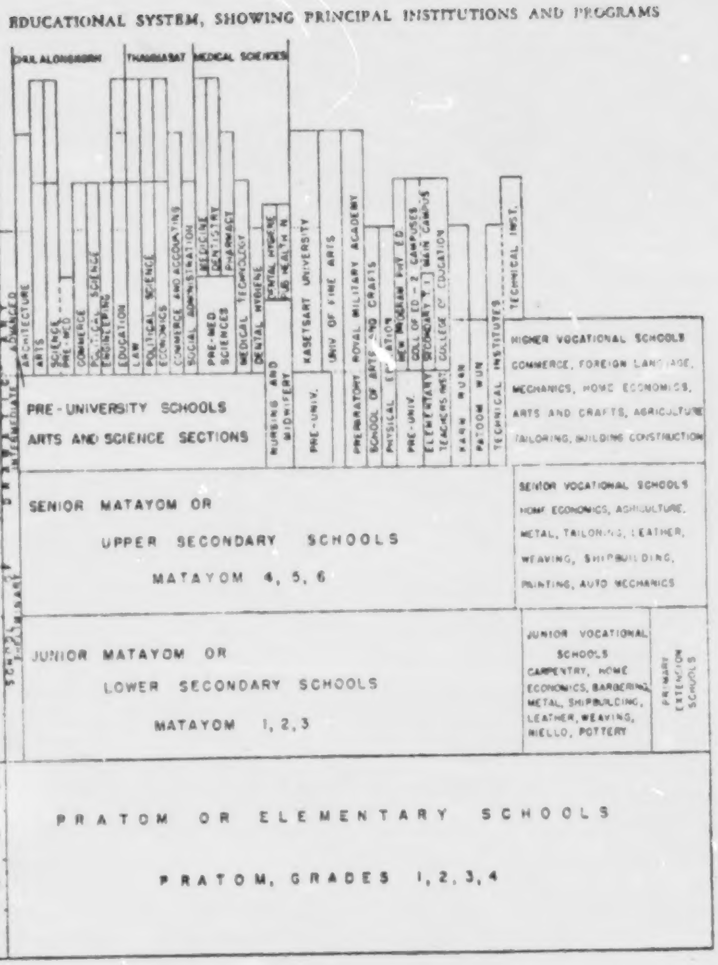

EDUCATIONAL PROGRAM
PUPIL'S AGE
20-25
18-19
15-17
12-14
8-11
4-7
UNIVERSITIES
PREP. SCHOOLS
HIGHER VOCATIONAL EDUCATION
ADULT EDUCATION
SECONDARY EDUCATION
SPECIAL EDUCATION
INTERMEDIATE VOCATIONAL EDUCATION
SECONDARY EDUCATION
PRIMARY EXTENSION
ELEMENTARY VOCATIONAL EDUCATION
COMPULSORY EDUCATION
ELEMENTARY EDUCATION
KINDERGARTEN

Figure 5.6a
Educational Programs in Thailand



EDUCATIONAL SYSTEM, SHOWING PRINCIPAL INSTITUTIONS AND PROGRAMS

CHULALONGKORN
THAMMASAT
MEDICAL SCIENCES
ADVANCED
INTERMEDIATE
ARCHITECTURE
ARTS
SCIENCE
PRE-MED
COMMERCE
POLITICAL SCIENCE
ENGINEERING
EDUCATION
LAW
POLITICAL SCIENCE
ECONOMICS
COMMERCE AND ACCOUNTING
SOCIAL ADMINISTRATION
MEDICINE
DENTISTRY
PHARMACY
PRE-MED SCIENCES
MEDICAL TECHNOLOGY
DENTAL HYGIENE
DENTAL HYGIENE
PUB HEALTH N
NURSING AND MIDWIFERY
KASETSART UNIVERSITY
PRE-UNIV.
UNIV OF FINE ARTS
ROYAL MILITARY ACADEMY
PREPARATORY
SCHOOL OF ARTS AND CRAFTS
PHYSICAL EDUCATION
NEW PROGRAM PHY ED
PRE-UNIV.
COLL OF ED - 2 CAMPUSES
MAIN CAMPUS
SECONDARY T 1
ELEMENTARY
TEACHERS INST.
COLLEGE OF EDUCATION
KARN RUAN
PATOOM WUN
TECHNICAL INSTITUTES
TECHNICAL INST.
PRE-UNIVERSITY SCHOOLS
ARTS AND SCIENCE SECTIONS
HIGHER VOCATIONAL SCHOOLS
COMMERCE, FOREIGN LANGUAGE,
MECHANICS, HOME ECONOMICS,
ARTS AND CRAFTS, AGRICULTURE
TAILORING, BUILDING CONSTRUCTION
SENIOR MATAYOM OR
UPPER SECONDARY SCHOOLS
MATAYOM 4, 5, 6
SENIOR VOCATIONAL SCHOOLS
HOME ECONOMICS, AGRICULTURE,
METAL, TAILORING, LEATHER,
WEAVING, SHIPBUILDING,
PAINTING, AUTO MECHANICS
JUNIOR MATAYOM OR
LOWER SECONDARY SCHOOLS
MATAYOM 1, 2, 3
JUNIOR VOCATIONAL SCHOOLS
CARPENTRY, HOME ECONOMICS, BARBERING, METAL, SHIPBUILDING, LEATHER, WEAVING, NIELLO, POTTERY
PRIMARY EXTENSION SCHOOLS
PRATOM OR ELEMENTARY SCHOOLS
PRATOM, GRADES 1, 2, 3, 4
SCHOOLS
PRELIMINARY
6
5
4
3
2
1
8
7
6
5
4
3
2
1
4
3
2
1

Diagram designed by William H. Strain.

Figure 5.6b

Educational System with Principal Institutions and Programs in Thailand

3. The freedom, by Constitutional right, of individuals to attend public schools and colleges without regard to race, color, creed, or national origin.
4. An educational structure within which students proceed from one level to the next higher level with some flexibility and alternative approaches.
5. Legal authorization for public administration, control, and support of local schools.
6. Compulsory attendance laws and foreign equivalency mechanisms for individuals to attend school.
7. Diversity in curricula, programs of study, courses of study, instructional procedures, and expected learning outcomes.

> A general philosophy of education in the United States threads through the entire diverse educational enterprise. This philosophy holds that all citizens are to be provided full opportunity to learn fundamental knowledge and skills so that the full potential of each individual can be realized.

The ultimate end is to enable each citizen to lead a satisfying and useful life, of value to the individual as a self, the community at large, and the nation's society as a whole. These expectations represent the necessities for education in the multicultural democratic society which the United States is.

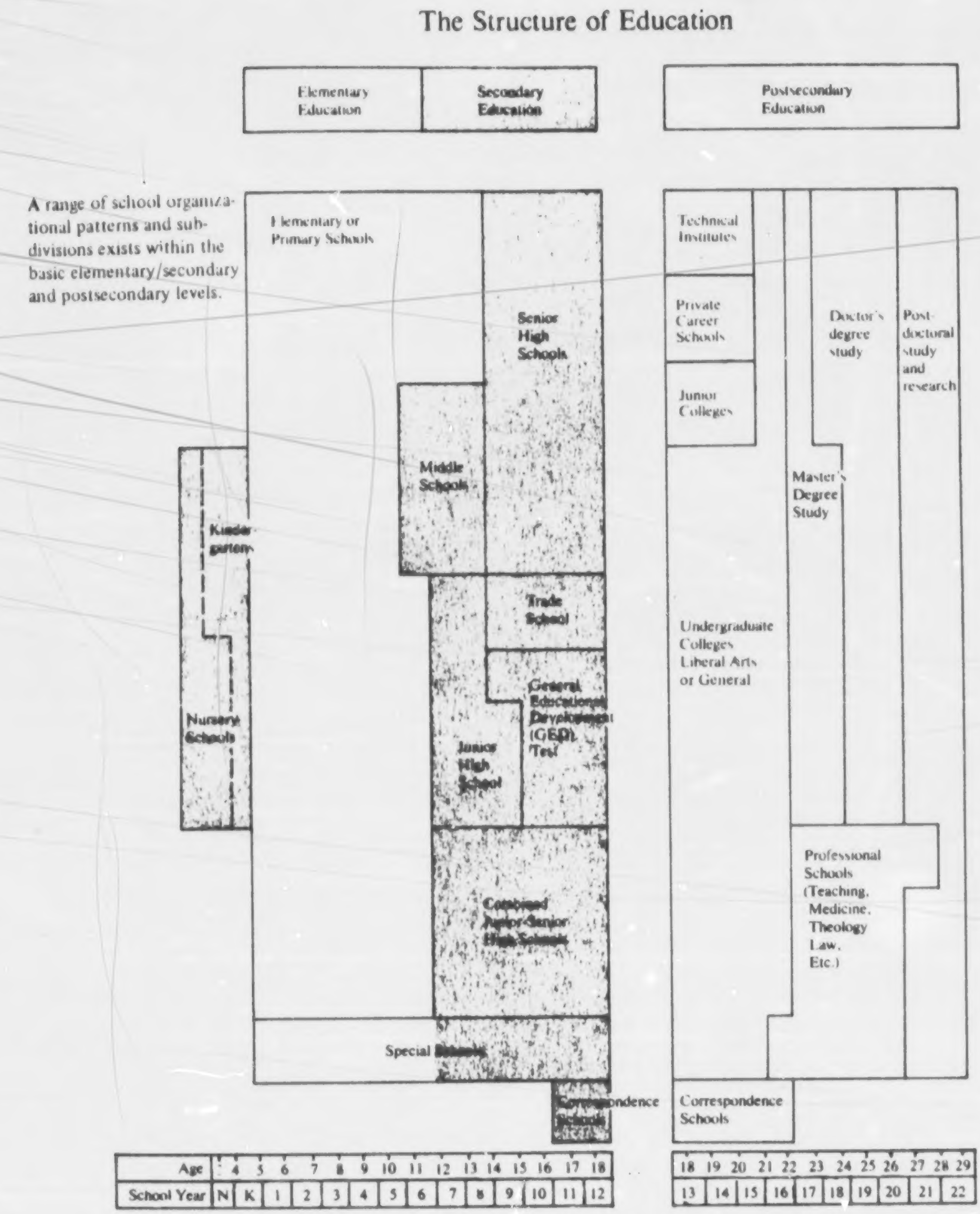
Since the Constitution of the United States makes no direct reference to education, education in the United States is basically a function of the states. However, the broad constitutional expressions covering the doctrine of rights and powers have imposed on the federal government various kinds of educational guarantees, responsibilities, and activities. The federal response has been evident in executive orders, congressional legislation, court decisions, federal appropriations, and other governmental actions to promote the national cause of education all over the country.

The existence of fifty distinct state systems of education is considered by many a benefit in so far as it diffuses centralized power and accommodates diverse sectional needs. On the other hand there is lack of uniform and often comparable standards of education. This circumstance, therefore, leads to a range of school organizational patterns with varied schooling agencies within pre-elementary, elementary, secondary, and post-secondary education. A diagram of the diverse structure of education in the United States is shown in Figure 5.7.

Divisions of Education in the United States

The administration and organization of the public school systems in the United States, in their diversity, have been described. The component parts of this organization, though diverse, are part of an educational ladder with expected educational objectives to be achieved. The divisions of education have been variously described and named but for purposes of this comparison they will be referred to as pre-elementary, secondary, and post-secondary (higher) education.

Pre-elementary education. Pre-elementary education was once referred to as pre-school education. This designation was made primarily because the educational programs and schooling agencies were not



The Structure of Education

A range of school organizational patterns and subdivisions exists within the basic elementary/secondary and postsecondary levels.

Elementary Education
Secondary Education
Postsecondary Education
Elementary or Primary Schools
Senior High Schools
Middle Schools
Kindergarten
Nursery Schools
Trade School
General Educational Development (GED) Test
Junior High School
Combined Junior-Senior High Schools
Special Schools
Correspondence Schools
Technical Institutes
Private Career Schools
Junior Colleges
Undergraduate Colleges Liberal Arts or General
Master's Degree Study
Doctor's degree study
Post-doctoral study and research
Professional Schools (Teaching, Medicine, Theology Law, Etc.)
Correspondence Schools
Age
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
School Year
N K 1 2 3 4 5 6 7 8 9 10 11 12
18 19 20 21 22 23 24 25 26 27 28 29
13 14 15 16 17 18 19 20 21 22

Figure 5.7
Structure of Education in the United States

considered to be part of the public school system or supported by public funds. School systems are increasingly extending their concerns for education to the child before birth and are incorporating pre-natal and post-natal care (in cooperation with public health services) in the home, as a part of their educational systems.

Pre-natal and post-natal education have the central purposes of:

1. the child's being well-born and
2. the child's entrance into a home environment conducive to its well-being.

Pre-nursery school or daycare education is growing particularly in situations where parents have to work and need childcare so they can. Educationally these schools contribute to the child's early sociability adjustments with other people.

The nursery school serves the needs of very young children varying in age of eighteen months to four (4) years. It supplements the early training in the home or daycare centers by more systematically addressing its activities to the early physical, social, emotional, and mental needs of the developing child. The program includes indoor and outdoor play, individual-centered and group activities, rhythmic movements, listening, music, materials, color and form perception, communicating, stories, discussions, and health habits.

The kindergarten provides educational experiences for children generally between the ages four to six. The objectives of the kindergarten include promotion of the child's physical growth and welfare, their ability to work alone and in groups, and in the development of readiness for the tools of literacy and learning; in particular reading, writing, and arithmetic, of the first grade in elementary school. As in the nursery school, the program is flexible and informal. The child's experiences include work concepts, play, music, dance, and story enjoyment (story telling, discussion, portrayal, listening). The child thus widens his vocabulary, improves his speech, begins to become aware of magnitudes and numbers, and develops the readiness for reading. Through the achievement of the goals of the kindergarten school many children adjust themselves more easily and readily to the elementary school.

Elementary education. The traditional elementary school is eight grades in length. More current organizational patterns are for six-year programs, even five or four-year programs.

In an eight-year school, grades one through three are called primary; grades four through six, intermediate; grades seven through eight, advanced;

The general objectives of elementary education are:

1. To develop knowledge and skills in the basic areas and tools of literacy and learning.
2. To initiate the growth of the child intellectually, physically, socially, ethically, and aesthetically.
3. To develop awareness of responsibilities and privileges of a citizen in a democratic society.

Secondary education. Although more varied in organizational structure the secondary school in the United States corresponds approximately in time and content to secondary schools in other parts of the world.

One organizational structure is of nine years duration consisting of the following:

junior high school	grades 7 through 9
senior high school	grades 10 through 12
junior college	grades 13 through 14

Although many educational alignments do not consider the junior college a secondary school, in many instances the junior college curriculum content and academic puposes are no different from other standard secondary schools. Organizational patterns of school systems with secondary schools set forth in this manner may be described in patterns as:

6(elementary) 3(junior high) 3(senior high) 3(junior college); or
K(kindergarten) 6-3-3-3, or
N(nursery school) K-6-3-3-3.

The traditional secondary school embraces grades 9 through 12. The organizational patterns of traditional systems are usually designated as 8-4 or K-8-4.

Specialized secondary schools may consist of comprehensive high schools, vocational high schools, trade schools, or technical high schools. Although the general secondary school is characterized by its non-selective nature of admissions, the specialized academic, scientific, or cultural high schools may require an entrance examination and, to this extent, depart from the general non-selective nature of secondary education in the United States.

The fundamental objectives of the secondary schools may be described in various broad categories such as:

Development of self-realization,

Development of human relationships,

Development for economic efficiency, and

Development of civic responsibility.

These purposes embrace the old cardinal principles of education; namely health, command of the fundamental processes, worthy home membership, vocational efficiency, citizenship, worthy use of leisure, and the development of ethical character as well as the several more recent objectives set forth for secondary education.

Schools in the State of Iowa

As of 1974 there were 2310 school attendance centers in Iowa. According to Data on Iowa Schools 1973-74

> "An attendance center is considered as a separately organized school according to the type of organization for that school district. For example, a district organized as a K-6-3-3 could have three attendance centers with all the centers located in the same building or on the same campus."[1]

The number of public, non-public, and special education attendance centers in Iowa during the period 1968-74 is shown in Table 5.1.

In 1976 a total of 450 public high school districts were operative in the final phase of implementing the 61st Iowa General Assembly's legislation in 1965 requiring all areas of the state to become part of a legally constituted school district maintaining a high school.

Organizational patterns of school systems in Iowa. The organizational patterns of school systems in Iowa are reflected in Table 5.2 and Figure 5.9.

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[1] State of Iowa Department of Public Instruction, Planning and Management Information Branch. Data On Iowa Schools 1973-74, April 1975, p. 19.

TABLE 5.1

NUMBER OF ATTENDANCE CENTERS IN IOWA, 1968-1969 THROUGH 1973-1974 SCHOOL YEARS[1]

Kind	No. centers					
	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74
Public						
Elementary	1,299	1,156	1,137	1,137	1,109	1,219
Junior High	234	229	232	235	238	238
Senior High	336	329	330	323	321	317
Combined Junior and Senior High	134	140	141	146	146	152
Non-Public						
Elementary only	321	255	230	245	225	229
High School only	38	38	31	37	34	36
Combined Elementary and High School	15	17	17	12	18	11
Special education	92	147	146	145	147	108

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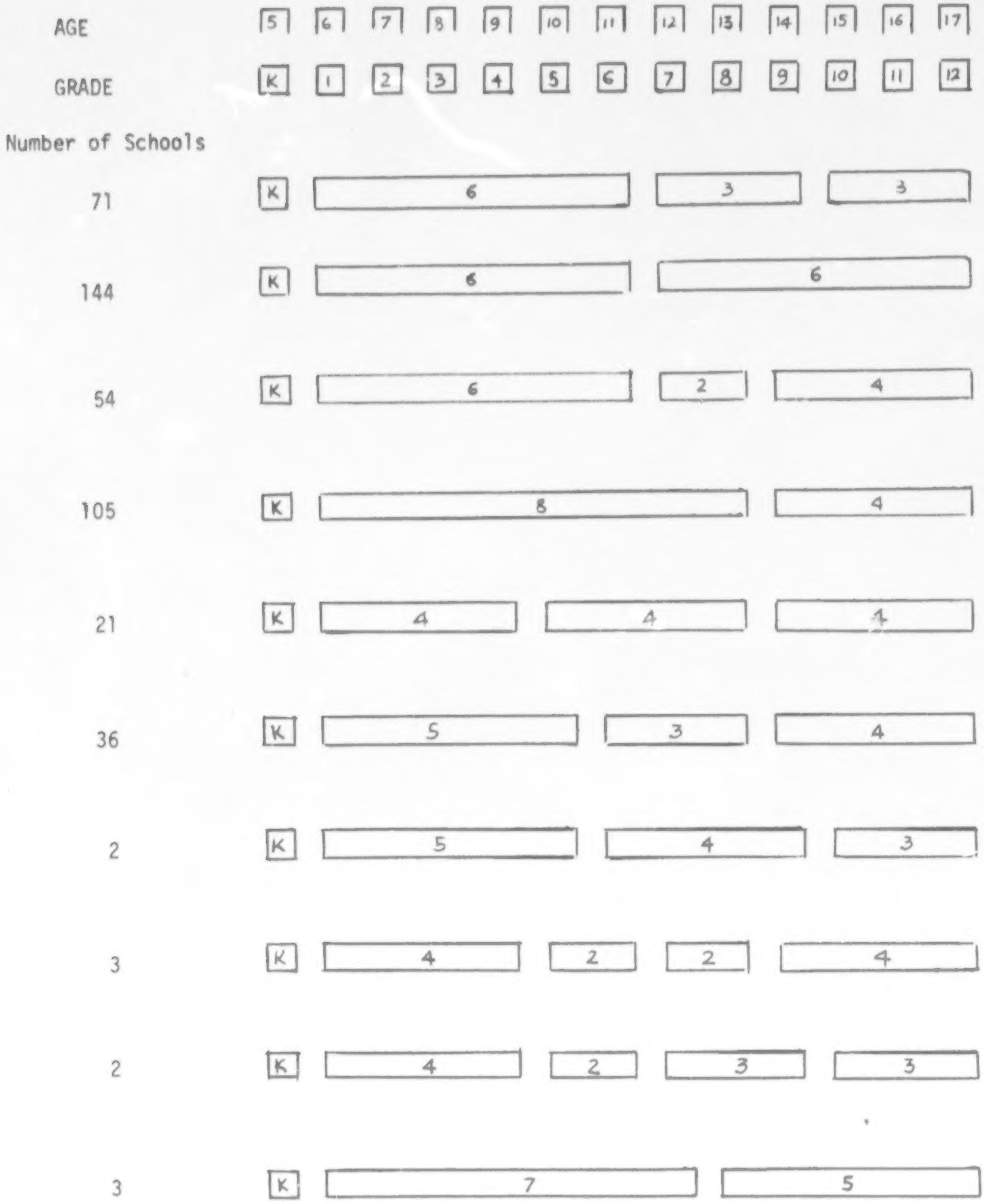
[1] Source Data on Iowa Schools 1973-74, State of Iowa Department of Public Instruction.

Table 5.2

NUMBER, PERCENTAGE, AND ORGANIZATIONAL PATTERNS OF IOWA SCHOOL SYSTEMS, 1976

Organizational Pattern	Number of School Districts	Per cent
K-6-3-3	71	16.17
K-6-6	144	32.35
K-6-2-4	54	12.13
K-8-4	105	23.59
K-4-4-4	21	4.71
K-5-3-4	36	8.08
K-5-4-3	2	0.44
K-4-2-2-4	3	0.67
K-4-2-3-3, K-3-3-2-4, & K-4-2-6	4	0.89
K-7-5	3	0.67
Unspecified	7	1.56


AGE
5 6 7 8 9 10 11 12 13 14 15 16 17
GRADE
K 1 2 3 4 5 6 7 8 9 10 11 12
Number of Schools
71 K 6 3 3
144 K 6 6
54 K 6 2 4
105 K 8 4
21 K 4 4 4
36 K 5 3 4
2 K 5 4 3
3 K 4 2 2 4
2 K 4 2 3 3
3 K 7 5

K-3-3-2-4 = 1 K-3-3-2-4 = 1 Unknown = 7

Figure 5.9

Organizational Patterns of Schools in Iowa

SIMILARITIES AND DIFFERENCES IN SCHOOL SYSTEMS IN THE UNITED STATES AND IN SOUTHEAST ASIA

Similarities

In general there are many similarities between the Indochinese educational systems and that of the United States.

Organizational pattern - age and grade

There are three levels of elementary-secondary education in all school systems. The equivalent to this education in the United States would be elementary, junior high, and senior high education. Although there is a little difference in the length of the time period of each level, the total twelve grades and the organizational pattern in grade-age are the same. A comparison of the grade patterns may be seen in the following example:

In Vietnam: 5 - 4 - 3
In Cambodia: 6 - 4 - 3
In Laos: 6 - 4 - 3
In Indonesia: 6 - 3 - 3
In Malaysia: 6 - 3 - 3
In Philippines: 4 - 2 - 2 - 2
In Thailand: 4 - 3 - 3 - 2
In the United States: K - 6 - 3 - 3

The entrance grade-age(s) are for example:

In Vietnam: grade 1 age is 6.

In the United States: grade 1 age is 6.

Curricula and course content

The curricula and course content in subject areas in the United States and Indochinese elementary schools are quite similar. The differences in the elementary curriculums are insignificant, expecially in terms of basic knowledge for age 6 - 11 school children.

Vietnamese students, in particular, learn more in theory than in experimentation in natural science (biology). Much of this is due to the lack of instructional materials. In mathematics Vietnamese students have experience in doing many complex and difficult exercises and problems. They are considered strong in mathematics, slightly weak in experimental science, but deficient in English. Otherwise, most of the Vietnamese elementary curricula are similar to the elementary curricula in the United States.

Differences

The differences in the United States and Vietnamese education are more significant in secondary education.

Credit for learning

Credits or units are not awarded in Vietnamese secondary schools. Within a section there is no choice of subjects offered. In fact, the Vietnamese students have two major choices. The first choice is that of the branch of education: general, technical and vocational, agricultural, or comprehensive education. The second choice is that of the section within each branch. In the branch of general education, for example, they choose one among the four sections; A, B, C, or D. Once these choices are made they follow the whole program determined for each grade around the school year within each section. The credit or unit system in the United States' secondary schools leads to large possibilities of choices to the students.

Philosophy of education

In terms of philosophy of education the American educational program allows for an individualized program while the Vietnamese educational program tends to be a general and uniform program.

Articulation

In Vietnam the separation of different branches is very rigid and does not permit a student in one branch the opportunity to learn other subjects in another branch. Students in general education, the most important branch that enrolled more than 80% of secondary students, are taught nothing about business or industrial arts. All subjects offered in this field deal with theoretical knowledge in science and liberal arts.

Student grouping

Vietnamese students in sections A and B are very strong in mathematics and theoretical science. Their knowledge in these fields is higher than that of other students in the same grade. But there is a lack (for them) of laboratory work, practice, and experimentation.

Students in sections C and D are strong in literary art, philosophy, and human science.

Grading

There is a great difference in the grading system between Vietnamese and American schools. Therefore, this must be considered differenctly. In the Vietnamese grading system it is very difficult to have an average standard score over $\frac{12}{20}$. Consequently, very few students could have "good" or "very good" grades. The grade "excellent" and "honors" are rare. Most students earn a grade of "pass". Therefore, for Vietnamese administrators and educators, the consideration of the student's rank in his class is more commonly used than the consideration of his grade.

SUGGESTIONS FOR TEACHERS AND ADMINISTRATORS
WITH IMPLICATIONS FOR IMPLEMENTATION

School Records and Indochinese Names

One major administrative detail in the enrollment of Indochinese students in schools of the United States has to do with recording information about students on school records. Beginning with the student's name, it should be recognized that Indochinese schools have followed different name recording policies; consequenctly, student records, if available, will accordingly vary in form, format, and content. Name-order and naming patterns are different for Vietnamese, Cambodians, and Laotians. Therefore, personnel policies as reflected in school records are here discussed separately for each Indochinese country.

Vietnamese name recording

Vietnamese usually have three parts to their name, e.g., Le Thanh Thien (a male) or Nguyen Thi Hong-Van (a female). The Vietnamese surname or family name is written first and the given or chosen name last, as shown in the following illustrations:

Surname Family Name	Middle Name	Given or Chosen Name	
Le	Thanh	Thien	(Vietnamese male)
Nguyen	Thi	Hong-Van	(Vietnamese female)

The name form in the United States comparison would appear as:

Surname Family Name	Middle Name	Given or Chosen Name	
Smith	Henry	John	(United States male)
Berry	Mae	Dorothy	(United States female)

or John Henry Smith and Dorothy Mae Berry.

While the American male adult would be known formally as Mr. Smith and informally as John, his Vietnamese counterpart would be known both formally and informally by his given or first name; Thien or Mr. Thien. The Vietnamese female is also known by her given name; Hong-Van or Miss Hong-Van. If she is married, she can be known formally as either Mrs. Hong-Van (her given name) or her husband's given name, Mrs. Thien. This may cause some confusion for the American school administrators when dealing with the Vietnamese student's records.

Vietnamese birth date recording. The birth date on the Vietname birth certificate is given in the following order; day, month, and year. One who was born on April 10, 1970, has his birth date written:

10 - 4 - 1970, instead of 4/ 10/ 70, as the Americans do. This
day month year mo day yr

order of birth recording should be remembered when reviewing the records of Vietnamese.

School records for Vietnamese students. Since student school records should reflect name of the parents, as well as the name and birth date of the child, and because of the differences in recording practices, problems very often arise requiring administrators to make some policy decisions regarding form, sequence and content of student listings on records. These policies would provide answers to questions such as the following:

How should the school list and file a Vietnamese student's name?

How should a school record for the Vietnamese child be set up?

How should the birth date be listed?

How should the names of the parents be listed?

In light of the recording differences, to facilitate the administrative operation, it is suggested that two records be kept for each Vietnamese student: Record A (the principal record) and Record B (a cross file). Record card A will be filed by the individual's given name (the Vietnamese way). Record card B will be cross-filed by the family name (the American way). On both records the child's given name should be underlined or circled. For example:

Record Card A		Record Card B	
Student's name:	Ho Van Lam	Student's name:	Lam Van Ho
Birth date:	10 April 1970	Birth date:	April 10, 1970
Parents name:	Ho Van Chieu (father) Tran Thi Thu (mother)	Parent's name:	Chieu Van Ho (father) Tran Thi Thu (mother)

Another example of records for the children

Ho Van Lam (boy) and Ho Thi Thanh (girl)

whose parents are Ho Van Chieu (father) and Tran Thi Thu (mother):

Principal Record	Secondary Record
Name: Ho Van Lam Sex: M	Name: Lam Van Ho Sex: M
Birth Date: 10 April 1970	Birth date: April 10, 1970
Home Address: 716 Residence St.	Home Address: 716 Residence St.
City: Newtown, Iowa	City: Newtown, Iowa
Telephone: 232-5790	Telephone: 232-5790
Parent's Name: Ho Van Chieu (Mr.)	Parent's Name: Chieu Van Ho (Mr.)
Tran Thi Thu (Mrs.) Can also be Mrs. Chieu	Thu Thi Tran (Mrs.) Can also be Mrs. Chieu

Principal Record	Secondary Record
Name: Ho Thi Thanh Sex: F	Name: Thanh Thi Ho Sex: F
Birth Date: 6 September 1972	Birth Date: September 6, 1972
Home Address: 716 Residence St.	Home Adress: 716 Residence St.
City: Newtown, Iowa	City: Newtown, Iowa
Telephone: 232-5790	Telephone: 232-5790
Parent's Name: Ho Van Chieu (Mr.)	Parent's Name: Chieu Van Ho (Mr.)
Tran Thi Thu (Mrs.) Can also be Mrs. Chieu	Thu Thi Tran (Mrs.) Can also be Mrs. Chieu

Even though the name situation was often confusing to the school administrator when refugees first arrived, the situation may really be more confusing now since efforts have been made to "Americanize" names. Many Vietnamese adults and others have changed the traditional order of individual names, leaving the administrator guessing about how to list a newly enrolled child and set up his record. Hopefully, administrators will be able to ascertain the necessary information to set up adequate records.

Cambodians, like the Vietnamese traditionally place their family names before their given names and are called by their given names. For example, Sok Sam Soy's family name is Sok, but he would be called Soy or Mr. Soy, as appropriate. In developing school records, one can use the same system devised for the Vietnamese.

Laotians, traditionally write their names as is done in the United States with the given name first and the family name following. However, they follow the Vietnamese or Cambodian custom of being addressed, both formally and informally, by their given name. For example, Khamkip Baccam would be called both formally and informally, Mr. Khamkip. The Laotians usually have only two names in their complete name.

Americanizing the Names of Indochinese

Many teachers have Americanized or changed a student's name in an effort to make students feel more a part of the classroom with the other children. Examples of the practice are such as Lenny for Liem and Fanny for Phung.

It must be remembered that a family name is probably a most personal heritage and root identity which many persons have. Teachers and administrators should be mindful of the possible effect and connotation "Americanizing names" has on all children, expecially minorities. The school should not take away their identity. If, however, the student wants to be called by an American name or a nickname then perhaps it would be well for the student to be called by the name of his choice. (Teachers and administrators should be assured that the Indochinese student is not being pressured by peer students to Americanize a name as the "in thing".) All school records should contain only the official name.

Grade Placement

After a child is enrolled in school a natural next question to arise is "What grade should he be placed in?" During initial contacts with incoming Indochinese refugee children, school administrators must make a complex decision about placing these children in the most appropriate grade level. Administrators have discovered that one sweeping principle or practice will not work with all children, just as it does not work with all American children. The task is even more difficult when children do not have any records, cannot speak English, and are not able to advise the school about their academic background or potential.

The essential problem of placement is still that of knowing where the Indochinese student is - academically, psychologically, physically, and linguistically.

Grade placement is especially important for refugee students. It must be recognized that in a short time many were uprooted from their homes and homeland and faced with many changes in life style, as well as challenges in a new country. It is likely that these children will feel more frustrated if they are not placed in what they consider the right and comparable place in United State's schools. Adverse developments resulting from improper placement will result in disadvantages for the student, likely disruption in the classroom, confusion in the schools, and dismayed citizens in society as well. Therefore, to avoid many possible difficult situations, the placement of refugee students should be considered carefully.

Obviously, no one set of grade placement criteria will work for all students. The enlightened school staff must be well aware of the fact that individual differences must be dealt with individually. A student's level of academic maturity, his social development, his parents' wishes, his background of experiences, his and his willingness to try new things will all have to be considered.

The school administration, in developing placement procedures, needs to address itself to several important questions:

Question: What does a comparison of schools the student attended in Indochina and the United States reveal? What did the student study at a given age in the school attended previously?

Consideration: Though the method of teaching in the countries differs considerably, what is studied at a given age is remarkably similar. A refugee child of eleven, for example, has studied essentially the same skills and concepts his American counterpart has studied. The priorities differ but the concepts and skills are very similar.

Question: Given the fact that most Indochinese refugee children do not handle English well enough to conceptualize in it, the question is raised: will new work (skills, concepts) be impossible if the student is kept at his grade level?

Consideration: At some point an assessment should be made of the linguistic needs of children with limited English speaking ability. It should be determined if--(1) the first spoken language is other than English, or (2) the language most often spoken at home is other than English, or (3) the language most often spoken by the child is other than English.

In assessing the children's needs--educators must be mindful of the implications of child development principles in recognizing that not every child learns at the same rate, to the same degree, and with the same understanding; further, all children have basic needs which vary; and further still, all children possess characteristics and potentials which may be manifested in different ways conditioned by cultural and experiential factors. It may be discovered in analyzing the comparable school systems that very few new and different concepts are learned each year. Academic progression in comparable systems is slow, steadily building on what has gone before. Essentially, the same limited number of key concepts and skills are studied and reinforced year after year in all systems.

Question: If a student did not have enough English to understand a teacher's explanation or read the text, would the concept be missed? Further, would this not be seriously retarding and frustrating?

Consideration: Considering that the thrust of both curriculum and text material seem to be to teach few concepts and skills repeatedly in a variety of ways, it is possible that the teacher will be able to find a way of getting the concept to the child, with or without the text. Furthermore, if the concept is missed there will be another chance at it. The curricula of all systems provide this.

Question: If the Indochinese child cannot keep up (with class discussion, teacher lecture, reading the text, probably because of his lack of English), will the concept be missed?

Consideration: As we know, concepts can be taught at many levels of abstraction. The most complex concept can be expressed in very simple language. Teachers may do well to learn how to express concepts at varying levels for all their students.

Question: Can the Indochinese student learn English fast enough to participate fully in the instructional process?

Consideration: Whether or not the Indochinese student can learn English fast enough to participate in class depends on how good the school's program of teaching English as a second language is. Experience has indicated that good programs have enabled most Indochinese to continue their education with little interruption. Schools which do not provide a good program of English as a second language can expect the refugees to have difficulty for some time to come. In the latter situation the problem is not with placement or with the refugee's background, but with the school's program to meet the needs of the student.

Another factor to consider is the move to have teachers realize that in most countries throughout the world bilingual and multilingual communication are stressed and/or required. Teachers must not assume that languages other than their own are to be less well respected. Some effort on the part of teachers to communicate (even in a limited way) with their students in their own language would have immeasurable positive effects in the classroom.

If the Indochinese students are to be placed in a grade level appropriate to their own educational background, and the students speak little or no English, the school staff will have to employ a variety of ways to determine what the student knows. The following questions may be used as guidelines for arriving at a decision for placing the Indochinese student in an appropriate grade and level:

1. What learnings (concepts, knowledges, understandings) are delineated for each school grade level?
2. What concepts, knowledges, and understandings does the refugee student already have? What mechanism can be used to secure evidence of the level and extent of the student's abilities and skills? Actually, the question is, what abilities and skills does the student demonstrate?
3. What background for grade level concepts, knowledges, and skills does the student have? How can the student demonstrate these or what evidence provides this information?
4. What will be the most important learnings to be covered in specific grade levels and school during the year?
5. Does the student exhibit considered deficiencies in English? In communication?
6. If there are communication deficiencies, how relevant might they be to the students achievement? Are there alternative strategies of instruction which can hurdle the deficiencies in communication?
7. Are any materials available so that learning and development can go on in the student's dominant language?
8. Where should the student be placed according to background, academic preparation, social adjustment, sense of security, problems of adjustment?

The Placement Process

In making use of information secured about the student in relation to previous questions the placement process may also involve using some nonverbal assessment approaches such as: doing mathematical computations, sequencing pictures into a meaningful order, recognizing the symbolic nature of a scientific item, responding to a nonverbal cartoon, responding by drawing a picture or choosing a picture, role playing with Indochinese sounds, etc.

If possible make use of a bilingual aide (or any bilingual adult or older student) to assist in giving directions and interpreting the responses. Finding what a student already knows as suggested in the earlier questions for consideration may involve one or more of the following processes:

1. The administrator, teacher or both must decide on the concepts or skills to be identified or assessed for grade placement, and prepare or develop an appropriate means of making the assessment. A bilingual aide (if needed) can assist in translating the question or material into the native language and secure the placement evidence needed under supervision of the American staff member. The aide would relate to the school staff the responses given so that results can be evaluated and appropriate judgments made.
2. To secure information about the student's background a sequence of questions providing the needed information about background should be formulated. The answers, taken together, could reveal some of what the student knows. Skills and concepts critical to success at various school grade levels are knowingly complex; therefore, one must keep in mind that no single question or test is definitive. However, several related questions or tasks may reveal much more about what a student knows and can do than a single assessment.

3. The complexity of language and communication for the partial bilingual student should be reduced. School persons should remember that concepts can be expressed in very simple language. The process of reducing language complexity may involve using shorter sentences, fewer clauses, less technical vocabulary, and repetition of key words and phrases related to the concept. The partial bilingual student may be able to demonstrate good mastery of a concept in simple language.
4. If the student can read some English, reading of assessment information should be used rather than responding to inquisitions orally. Many Indochinese students have demonstrated a greater ability to read English than to orally understand and/or produce it. It should be noted that voice entonement by a teacher may have significant meaning to the Indochinese student.
5. Let the student respond to a question or stimulus in the student's native language and from previous or earlier cultural background. If the assistance of a bilingual aide is available, translation of what is said can be expressive, meaningful, and morale building. Asking a student to explain a concept or demonstrate a skill in a foreign language (in this case, English,) even though the material is familiar places a great burden on the student. The student can respond more fluently and fully if allowed to work through a bilingual aide. The aide, with the teacher, can assess just how much the student knows.

Some Placement Policies and Considerations

The following are some placement policies which have been followed and some comments about them:

Policy: Put refugee students in the grade sequence comparable to the one they finished during their last school year in their home country.

If student X had completed grade 5 in 1974-75 in Indochina, the student could possibly qualify to be placed in grade 6 in 1975-76 in an American school, not onely for reasons of academic equivalency but also for reasons of psychological adjustment.

Policy: Place refugee students in the grade they were in during their last year.

There could be two reasons for doing this. The first is that the last school year in the student's home country may not have been completely finished because of the intervention of war in Southeast Asia. The second reason could be due to the lack of facility in English usage of Indochinese students in American schools.

Policy: Place the Indochinese student one or two years behind previous placement in Indochinese schools.

Placing the student two years behind the actual grade will not improve the English speaking problem. While some parents and sponsors have asked for such retardation because they thought that the burden of learning in the new situation would be lessened, it is not the remedy. If the student has already mastered the concepts of the grade, such action may result in boredom and resentment. The problem of language can be solved in a short period of time, while the two-year retardation policy puts the child too far behind the academic level.

If such policy has been used it is hoped the student will be upgraded after a short period of time to compensate the disadvantageous situation. One must remember that academic deficiencies can be remedied through instructional programs, not through placement.

Policy: Since many Indochinese students are smaller in statute and appear to be shy put them with younger children.

This is not a good policy. First of all, it is not psychologically sound. Although this arrangement could be a temporary solution, it could have dangerous consequences. In the first place, the size of students has little to do with academic maturity. Social adjustment has more to do with compatibility of interests and sharing common experiences than does size. In the second place, Indochinese students give evidence that they quickly model their behavior after their American peers. It would be undesirably to place a student with younger students for social reasons and discover later that one had been molded into immaturity and may never have a basis for compatibility. It would seem better to place the student with Americans of comparable age and promote experiences which would make one a member of the group.

Policy: Place the student with comparable age group. This is probably a defensible placement decision although age is not a good criterion for placement of Indochinese students. Whether or not the student can keep up and interact within the age group is a matter which the instructional program and process must address themselves to.

Student age should not be the predominant consideration in the placement of students because of various age variations; however, age should be considered subsidiarily along with other criteria.

Policy: Find out what the student knows and place him at a grade level where he will academically advance.

Theoretically, this is a good policy, but its practicality and applicability raise certain questions and require considerations; such as, how will the school find out what the student knows. If the student has equal facility with English usage as the American counterparts do, the different kinds of tests currently used in American schools would not measure the ability of the Indochinese student. To prepare a new test in the student's own language might not be considered feasible unless time and money are available. The shortcut method to evaluate academic level is to know roughly what the grade level was in the country the student attended the last academic year. This could very well be an indicant of academic level. Based on this information the student could be placed in the equivalent grade in the American school. Yet there is no reason to ignore the academic background the indicant reflects from the last grade attended in the native country. Moreover, a comparison of schools in Southeast Asia and the United States reveals that what is studied at a given grade is remarkably similar, especially in the elementary level, including the same skills and concepts.

All in all, however, because many factors should be considered in placement, perhaps grade should be the primary determinant fact in initial placement decisions. It would be inadvisable to place a student far lower than the grade he was in his home country.

Choice of Subjects

The problems of placement, once grade level is ascertained, also involve choice of subjects and courses. There are some courses of subjects in which Southeast Asian students are naturally very interested and which can be considered the favorite subjects of these students. Such subjects are mathematics, physics, and chemistry. Some other subjects that demand great memory such as biology, history, and geography are not generally attractive for them. The third category, including literature, philosophy, and foreign languages, are considered "heavy" subjects to them. Usually these latter subjects are studied only if they are required or are obligated to be taken.

It would, therefore, seem wise for students to be provided the opportunity to study their favorite subjects and encouraged to have more work in other fields if this would facilitate their learning and adjustment.

Indochinese students are intelligent and curious. They like laboratory work, experiments, exercises, and problems that stimulate their curiosity activities. Thus they should do well in American schools if provided these opportunities.

Some subjects which are not offered in general secondary education in Southeast Asian schools are business education, home economics, industrial arts, and computer science, Students must be oriented to these fields with some encouragement if they are expected to take courses in these areas.

Improving English Usage

If the placement decision involves a concern for facility in English or communicative skills, then some arrangements should be provided to help with English usage as well as improvement in language skills. All Southeast Asian students need intensive courses in English, not only the conversational English, but also the technical vocabulary English. It would be helpful to provide refugee students tutored English classes and necessary materials for improving English such as textbooks and tapes. Likewise, teachers need a sensitivity to the needs and integrity of these students. Great use should be made of their cultural virtues in teaching. For example, bilingual methods of teaching could be quite effective, particularly for students understanding sciences. A technical word package, written in English and the student's native language with explanation in the cultural language, would be indispensable to help refugee students study quickly in science and related fields.

Sample Concepts and Basic Information Useful for Placement

The Manual for Indochinese Refugee Education published by the National Indochinese Clearinghouse, Center for Applied Linguistics, sets forth some sample concepts and procedures for ascertaining a student's probable placement level. The examples given are for two content areas -- reading and literature.

1. Concept: Words used to paint a picture or set a mood.

Purpose: To develop word usage through description to demonstrate word meaning comprehension.

Process: Students given a short writing assignment in his native language-description of a season or a scene.

a. Ask student to draw a picture of what is read. Teacher or aid can assess accuracy of interpretation (graded by grade level)

b. Ask student to list words of color, shape, design, mood. List phrases which best describe scene or paint the picture. (Graded by grade level)

c. Ask student to point out one or more implied comparisons and tell what they mean. (Grades 8 and up)

Another example requires the student give a short paragraph in native language describing the particular place:

2. Concept: Literature reflects the experiences and attitudes of both the author and reader.

Purpose: To develop ability to discern meaning from literature information.

Process: Student reads a short but forceful piece of literature in his native language.

a. Tell what experience in the author's life is mentioned in the reading. Tell what happened. (Grades level interpreted)

b. Make up a story telling what might have happened to the author to have inspired writing. (Graded)

Student reads a short, personal essay on a universal theme.

a. Tell a story from your own life which is similar to something mentioned in the essay. (Graded)

3. Other examples could follow the pattern of showing the child a picture (available in any reading program) with one or more aspects of the picture wrong. Ask child to tell what is wrong. (Graded)

Placement in the final analysis:

The placement of the refugee child will obviously require many considerations. Without a doubt, mistakes will be made; but, hopefully, the work in this area will be flexible enough to make adjustments. If mistakes are made in the placement of students, corrective measures should be taken to correct the mistakes. Students should be correctly placed in grades by way of upgrading or regrading. Moreover, (due to rules and regulations) some open-ended mechanisms might need to be used as a correctional alternative. In any case the child should be given the opportunity to make up any time or work which is considered lost.

MISCELLANEOUS ADMINISTRATIVE CONCERNS

The Manual for Indochinese Education, prepared by the National Indochinese Clearinghouse, Center for Applied Linguistics: has pointed up two additional administrative concerns for refugee development, (1) intelligence and (2) health

Intelligence Testing

During the past year several agencies have engaged in the translation of I.Q. tests (Stanford-Binet, Weschler Intelligence Scale for Children, etc.) into Vietnamese, Cambodian, or Laotian. Such translations have been discouraged, since standardized American intelligence tests are culture-laden, even when translated into another language.

Recent studies of testing practices in American schools have revealed gross biases against minority groups. Robert Williams (a black psychologist who is author of the Black Intelligence Test Counterbalanced for Honkies, also known as the B.I.T.C.H. Test) has demonstrated the unfairness of determining black intelligence scores based on tests requiring knowledge of white, middle-class culture. Similarly, a study by Jane Mercer shows that there has been a disproportionate classification of Mexican-Americans as retarded because of their low I.Q. scores. Even when tests have been purported to be culture-free or culture-fair (such as those requiring non-verbal stimuli) there are problems. Such tests often require analytical thinking to process the "correct" answer, and some Native American children value mythological over analytical explanations of natural phonomena. If current tests are biased culturally against blacks, Mexican-Americans, and Native Americans, they certainly are biased against Vietnamese, Cambodians, and Laotians. While minorities born and raised in the U.S. may not be of American culture, they are still in American culture; not even that can be said about the Indochinese refugees.

If the school finds that it is absolutely necessary to have some measure of the child's intelligence, it is suggested that an ad-hoc test be be devised in the student's native language by someone who shares the same cultural background as the student. In general terms, such a test should be descriptive and prescriptive (not selective and predictive) and should be used to determine the learning experiences required to more adequately ensure academic success.

Health Problems

As most refugees arrived in this country without school records, they also arrived without health records. In some cases, refugee children were immunized against the same diseases as were American children (smallpox, diptheria), in some cases not. And, of course, there are diseases prevalent in Southeast Asia which do not usually show up in this country. Two short publications should help the administrator and school nurse. The first, a 24-page booklet, Tips on the Care and Adjustment of Vietnamese and Other Asian Children in the U.S., is available from the Children's Bureau, Office of Child Development, P.O. Box 1182, Washington, D.C. 20013. The chapter on health information, while brief, is very useful.

The second publication was prepared by the Orange County (California) Department of Education. It is a 48-page booklet, _Health Services Forms with Vietnamese Translations_. Since forms used throughout the country are often very similar, schools can easily adapt these forms for their own needs. The booklet can be obtained for $1.25 from the Orange County Department of Education, Publication Sales, P.O. Box 11846, Santa Ana, California 92711.

APPENDIXES

Content of Subjects in Southeast Asian Schools

The basic structures of the schools in Indochina have been described. Bearing in mind the overall characteristics of the administrative structure, the organizational patterns and the curricula of these schools, American teachers and administrators may be better able to place refugee students in American schools. An additional aid might be in knowing the exact content of the subjects that refugee students studied in their schools. The Center for Applied Linguistics has supplied the content of subjects that students in Vietnamese schools studied in elementary schools and the various academic cycles, grades 6 through 12.[1]

Although the compilation here is of curriculum and subject content in Vietnamese schools, it is indicative of the subject matter content in schools throughout Southeast Asia.

By comparing the subject content of work ascribed to various grades in Vietnamese schools with that prescribed for schools and grades in United States schools it is possible to surmise the concepts and skills that refugee students have and those they need to acquire.

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[1] From: A Manual For Indochinese Refugee Education 1976-1977. The National Indochinese Clearinghouse, Center for Applied Linguistics, Arlington, Virginia. Prepared for Department of Health Education and Welfare, United States Repatriate and Refugee Staff. Pages 146-226, 268-279.

APPENDIX A

Curriculum Content of Elementary Schools in Vietnam

CURRICULUM - GRADE ONE

Vietnamese

In this first grade, the child will learn proper methods of conversation. He will be trained to observe shapes, colors, sizes and positions and learn to make comparisons and judgements. Vocabulary study, which begins in the 2nd semester, will focus on the school buildings, furniture, class activities and games. Also, vocabulary study will examine titles and honorifics used in the family hierarchy.

Reading: Children will be taught the alphabet, words and short sentences. Short paragraphs, related to the vocabulary lessons, will be added in Semester II. Moral maxims and proverbs will be memorized. Further, children will be asked to repeat model sentences to improve their accents and pronunciation.

Dictation: The pupils will learn to write what they have learned and the numbers from 1-10 (arabic numbers). They will begin to write to dictations of short sentences.

Composition: No prescribed program.

Moral Education

During grades 5, 4, and 3, moral education will concentrate on practice. While there are no scheduled lessons, the teacher will tell stories, illustrating the following virtues:

1. Duty toward oneself
2. Duty toward grandparents, parents and siblings.
3. Duty at school (toward teachers and friends).
4. Duty toward others (politeness, proper modes of address, etc.).

Civic Education

As in moral education, there are no lessons, but teachers will explain and have children practice:

1. traffic regulations
2. respect for property (private and public)
3. classroom behavior
4. hygiene at school
5. attitude toward the flag

Science

This subject will be taught on field-trips and through classroom observations. Concepts: left, right, time, day, week, month, seasons, sky, cardinal points.

Hygiene will be taught through practice: washing of hands, teeth, sitting correctly, how to eat and drink, learning to keep the school clean.[1]

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[1] Ibid., page 146.

AN EXAMPLE OF A SECOND-CYCLE CURRICULUM,

THE THU DUC DEMONSTRATION SCHOOL, 1972-73

Sections: I - Literature, II A - Science, II B - Math/Science, III A - Business Education/Accounting, III B - Business Education/Office Practice, IV A - Industrial Arts/Specialized, IV B - Industrial Arts/Math.

REQUIRED SUBJECTS	GRADE			REQUIRED IN SECTIONS	TOTAL HOURS
	10	11	12		
Vietnamese	3	3	2	IIA, IIIA, IVA, B	8
	5	5	3	I, IIIB	13
Social Studies	4	4	4	I, II, III, IV	12
Philosophy	0	0	3	II, III, IV	3
	0	0	6	I	6
Modern Language I	5	5	5	II, IIIA, IV	15
	6	6	6	I, IIIB	18
Modern Language II	4	4	4	I, IIIB	12
Mathematics	0	4	0	I, IIIB	4
	4	4	3	IVA	11
	4	4	4	IIIA	12
	4	4	5	IIA	13
	6	7	9	IIB, IVB	22
Physics-Chemistry	0	4	4	I, IIIB	8
	4	4	3	IVA	11
	4	4	0	IIIA	8
	5	6	6	II, IVB	17
Natural Science	3	0	0	I, IIB, III, IV	3
	4	4	4	IIA	12
Physical Education	2	2	2	I, II, III, IV	6
Business Education	5	6	9	IIIA	20
	5	6	6	IIIB	17
Industrial Arts	4	6	4	IVB	14
	7	9	10	IVA	26
Free Electives	3	3	0	II, IIIA	6
	6	6	0	I	12
TOTALS: (Minimum-Maximum)	30-33	30-33	29-35		90-100

This curriculum represents the first move toward comprehensive education.[1]

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[1] Ibid., page 145.

Arithmetic	Numbers from 0 to 100, counting, reading and writing to 100. Learning to add and subtract. Counting by 2, 5, and 10. Checking addition and subtraction. Carrying numbers, drawing straight, broken and curved lines; using money and introduction to the metric system.
Drawing	Sketching in chalk, pencil and colored pencils from a model.
Handicrafts (boys only)	Arranging pieces of cardboard into shapes (houses, animals, flowers, etc.). Folding and cutting paper into shapes. Covering books, picking and pressing flowers, cleaning tables anc chairs.
Activities	Songs and dances, tying knots, active games. Field trips and nature walks, exploring the neighborhood.
Physical Education	Walking, running, singing, dancing, mimicry, throwing balls, movement, breathing exercises.

CURRICULUM - GRADE TWO

Vietnamese: Vocabulary	The students learn lexical items concerned with people at school: principal, teachers, classmates. Vocabulary of games and sport; duties of children at school. They also learn the names of the parts of the body. Different kinds of food and table service; names of different components of western clothing. The honorifics and modes of address of aunts and uncles. Different kinds of houses and furniture. Finally, the vocabulary study extends to the names of domestic animals.
Reading	Reading texts and lessons learned by heart will include short, practical prose and verse pieces that are relevatn to the study of morals. Also, the National Anthem and folk poetry will be studied. Particular attention will be paid to pronunciation and intonation.
Dictation	Short selections from the reading texts. Emphasis will be put on punctuation.
Penmanship	Medium-sized script will be taught.
Composition	The composition is keyed to the vocabulary lessons, in four stages: a) the student will complete a sentence with a vocabulary word[1]

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[1] Ibid., page 147.

- b) answering questions on subjects taught that week
- c) making sentences with assigned words
- d) answering questions on an essay subject

Moral Education

There is no time specifically reserved for moral education, but discussion will be held on these subjects: (After the discussions, the pupils will copy a moral epigram into their notebooks.)

- a) The pupil's duty toward himself:
    - 1) doing physical education and making an effort
    - 2) learning about virtue
    - 3) contrition for one's mistakes
    - 4) economy
    - 5) modesty
- b) Pupil's duty at home:
    - 1) review of Grade 5 lessons
    - 2) maintaining a good reputation
    - 3) duty toward relatives
- c) Pupil's duty in school:
    - 1) review of Grade 5 lessons
    - 2) friendship
- d) Pupil's duty toward others
    - 1) politeness
    - 2) frankness
    - 3) love of others and spirit of helpfulness

Civics:

No lessons are scheduled, but discussions will cover:

- a) practicing traffic regulations
- b) socio-political organization on the local level
- c) respect for authorities
- d) historical anecdotes of a patriotic nature
- e) duties of the citizen -- respect for public and private property

History

Visits to historical sites in the area; stories of famous people native to the region; famous characters from Vietnamese history.[1]

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[1] Ibid., page 148.

Geography	The terms of geography: mountain, valley, river, seashore, hill, field. Practice finding the cardinal points (East, North, South, West).
General Science	The external organs, bones, skin, flesh. Common plants and animals. Soil and rocks. Air, wind and storms. Personal Hygiene as in Grade 5.
Arithmetic	Adding and subtracting to 1,000. Multiplication with 2, 3, 4, and 5. A half, a third, a quarter. Two figure multiplicands, with unit multipliers. Start learning to work problems mentally. Learning about meters, kilograms and liters. Practice in estimate measuring. Weighing with a balance scale and estimating weight by volume. Definition of a line, a point. Angles: right, acute, obtuse. Definition of a square and a rectangle.
Drawing	Drawing the geometric forms learned above. Also, drawing from models and free sketching.
Handicrafts	Cutting paper and cardboard along a line. Making paper toys; binding notebooks, labeling; pressing flowers, making utensils: brooms, chop sticks, lanterns, pen holders, etc. Girls will begin to study needlework: hemstitch, back stitch, overcast, chain stitching, and cross-stitching. Also, they will begin to learn food preparation and serving tea and arranging flowers.
Activities	Dances, songs, knot-tying, how to lay a fire, lively games.
Physical Education	Same as Grade 1.

CURRICULUM - GRADE THREE

Vietnamese: Vocabulary	Children will learn the days, weeks, months and years. Also, the names of the internal organs and diseases. Vocabulary items dealing with food and the culinary arts. Different parts of garments, as well as lexical items concerning European clothing will be studies. Different words describing house and building construction will be introduced. Words dealing with the following human relationships will be taught: the household, ancestors, paternal and maternal relatives, cousins, half-brothers and sisters, and orphans. Names of birds, fish, wild animals, forest, and mountains, as well as[1]

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[1] Ibid., page 149.

technical hunting and fishing terms will also be studied.

Reading Reading texts and lessons to be learned by heart will be short poems and prose pieces relevant to the Moral Education and Vocabulary classes.

Dictation Five or six-line passages drawn from the readings texts. Particular attention should be paid to letter formation and punctuation. Although grammar is not regularly taught at this stage, the differences between the low-rising and high-rising broken tones will be stressed.

Composition The pupils will write sentences with the verb "to be" and the words "then", "that" and "because". They will answer questions on subjects learned in reading classes and write descriptions of trees, animals and simple landscapes.

Moral Education As in Grades 5 and 4, there are no regularly scheduled classes in Moral Education, but discussions will be held covering the following topics:

1) filial piety
2) duty to parents when children are young
3) duty to parents when children are adults
4) duty to parents when parents are old and weak
5) duty toward teachers, schoolmates, at school and outside the school
6) keeping one's promises; sincerity
7) relationship with relatives and neighbors

Civics There are regular lessons and discussions centered around: traffic regulations, government administration, good manners, proper dress, behavior in public, duties of the citizen (paying taxes, military service, obeying the law) and patriotism.

History In addition to visiting local historical sites, the children will hear stories of heroes of Vitenam from ancient times to modern. The children should be taught the relationship between different historical events and modern times.

Geography In this class, the pupils will study the heavenly bodies, the poles, and hemispheres, and continents, oceans, tides, seasons and the lunar and solar calendars. They will study social organizations from the class to the school, village, town, district, province, neighboring provinces and Vietnam.[1]

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[1] Ibid., page 150.

Science	Areas studied will include: water, vapor, clouds and rain. The principle organs of the body, the senses, the circulatory, digestive, respiratory and excretory systems. The pupils will observe different types of animals: dogs, cats, oxen, rabbits, ducks, lizards, frogs, etc. Also, some types of metals and minerals: iron, zinc, copper, aluminum, chalk, clay, sand, salt and coal. In the area of hygiene, preventive medicine and care of the eyes, ears and respiratory, digestive, excretory and circulatory systems will be studied.
Arithmetic	Addition and subtraction with numbers greater than 1,000. Checking of addition and subtraction. The multiplication tables and multiplication with 3-figure numbers. Two-figure division. Adding, subtracting, multiplying and dividing with decimals. Further training in mental calculation. Geometry: square, rectangle, parallelogram and triangle. How to find the perimeter and surface area of above.
Drawing	Lessons will center on pencil drawing from models and realistic reproduction of fruits, leaves, etc.
Handicrafts	
Boys:	Using cardboard to make boxes, calendars, picture frames and toys. Book-binding. Sweeping and cleaning, taking care of clothes, making brooms, fans, etc.
Girls:	Binding books, sweeping and cleaning, pleating and hemstitching: simple, Italian, oblique and straight. Embroidering the 25 letters of the alphabet on canvas, cutting and sewing handkerchiefs, pillowcases and diapers.
Activities	Basically the same as in grade four, with the addition of skits and pantomimes. More knot-tying, plus laying fires, cooking rice, giving basic first-aid.
Physical Education	Breathing games, collective games.

CURRICULUM - GRADE FOUR

Vietnamese:	
Vocabulary	Vocabulary in this class will focus on official government terminology and the terminology appropriate to trades and occupations. Further, communication and transportation vocabulary will be developed. Meteorological vocabulary will[1]

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[1] Ibid., page 151.

also be introduced.

Reading	Modern prose and verse pieces which reflect national and social spirit will be studied. Short verses with moral content will be memorized. Reading should be fluent and natural without meaningless sounds between the words. The tone should match the meaning of the text, its characteristics, and details.
Dictation	Ten-line selections from modern literature relevant to the Moral Education classes. Special attention should be paid to punctuation and diacritical marks.
Grammar	Using the dictation selections, the pupils will study the parts of speech, different articles, the parts of a sentence, the active and passive voices.
Composition	Using phrases such as "only...", "not only...but also...", "and...again...", "each", "one", "some", "many", "all", "less", etc. Also, describing things, letter writing and writing narratives will be studied.
Moral Education	Through discussion and lessons, attention will be paid to the following: economy, foresight, courage and simplicity. Further, the responsibility of elders, the duties of younger brothers and sisters and respect for the family spirit. Pupils will also discuss their relationship to school and teacher. Justice, sincerity and patriotism as well as respect for discipline will serve as the final focuses of this class.
Civics	Practicing the virtues of a citizen of the Republic. Effort, sacrifice, self-confidence, self-reliance, wisdom as essential qualities of the political man. The elementary notions of birth, death and marriage certificates.
History	This course will provide a survey of Vietnamese history from prehistoric time, through the period of Chinese domination, Independence and the Period of Rivalry between the North and the South.
Geography	Physical, political and economic geography of Vietnam. The geography of Cambodia, Laos, Thailand and China in relation to Vietnam. Map drawing.
Science & Health	The following will be emphasized:[1]

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[1] Ibid., page 152.

A. Parts of the body, the senses, the skeletal, nervous and muscular systems in addition to the circulatory, respiratory and excretory systems.

B. Classification of animals

C. Parts and functioning of trees. Use of fertilizers.

D. Common and precious stones used in construction; common metals: brass, iron, steel, lead, tin, etc.

E. Hygiene:
   1. Review of previous study.
   2. Caring for food, dangers of alcohol, tobacco and opium, filtering water.
   3. Ways of digging wells.
   4. Methods of disinfection.
   5. Quarantines.
   6. Government health regulations.

Arithmetic	Review of four basic procedures; review of decimals and introduction to adding and subtracting fractions. Problems and exercises concerning everyday things. Multiples and submultiples of the metric system. Geometry: rhombus, trapezium, polygon and circles.
Drawing	Measuring a model by eye. Sketching from a model, decorative lines, drawing from memory and mixing water-colors.
Handicrafts	
Boys:	Modeling with clay, sketching, learning to saw, chisel and plane, binding books, planting flowers in pots, making useful objects.
Girls:	Mending, simple sewing, embroidery.
Activities	Reading music, rhythmic dancing, comic plays, first aid, compass orientation and knot-tying.
Physical Education	Swimming, exercise, collective games.
Child Care	
Girls only:	Child care: holding, bathing, dressing and feeding babies. Learning about breast and bottle feeding.[1]

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[1] Ibid., page 153.

CURRICULUM - GRADE FIVE

Vietnamese:	
Vocabulary	Pertaining to sports, games, sightseeing and tourism, culture, science, laboratories, seaports, import-export activities, social aids, philanthropy, race, religion, systems of government, military life, weapons, war and peace.
Reading	Reading of good prose and verse pieces from contemporary sources and excerpts from the Masters. The pupils should begin to recognize different kinds of style and be able to interpret texts.
Dictation	Passages of 15 lines relevant to vocabulary and moral education. Explanation of words and main ideas of the text.
Grammar	Linking several short sentences, writing transitions, beginning grammatical analysis.
Composition	Business letters, memoirs and explanations of adages and proverbs.
Moral Education	Discussion and lectures will stress: value and necessity of manual labor, choosing a profession, honesty, professional conscientiousness, mutual assistance, sacrifice to aid countrymen, kindness and charity, duties to the nation, respect for other cultures.
Civics	Duties of the citizen, observance of the law, love for justice and freedom, love for country and its symbols, rights of the citizen, elections, organization of the government, legislative powers, executive powers, public offices.
History	Survey of Nguyen dynasty, French colonial period and Independence Period.
Geography	Geography of Vietnam, India, the Philippines, Indonesia, Burma, Japan. The location of the continents (emphasizing powerful allies of Vietnam) and map-drawing.
Science	Gravity and weight, ignition, air pressure, pumps, barometers, magnets, electricity. Hygiene: parasites and bacteria, common illnesses, contagious illnesses.[1]

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[1] Ibid., page 154.

Arithmetic	Fractions, percentage, proportion, volume, density, prisms, cylinders.
Drawing	Measuring a model by eye, perspective, mixing colors, sketching, drawing in proportion.
Handicrafts	Polishing furniture, making furniture, toys, etc.
Physical Education	Same as Grade Four.[1]

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[1] Ibid., page 155.

APPENDIX B

Curriculum Content of
Secondary Schools in Vietnam

Indochinese Refugee Education Guides

#2

INTERMEDIATE/SECONDARY EDUCATION SERIES: Detailed Content of the Vietnamese Secondary Curriculum

In a former Bulletin, we tried to give some general information on Curricula in Việt-Nam (see Indochinese Refugee Education Guides, General Information Series #3: Education in Việt-Nam: Fundamental Principles and Curricular). The purpose of this material was to give school administrators a quick guide for early student placement in September 1975. We have now developed a new detailed guide focusing on secondary curriculum, which includes all concepts and experiences with which the Ministry of Education of the Republic of Việt-Nam would like to have equipped high school graduates.

Before studying the content of the curriculum, one should be aware of the nature of the Vietnamese high school. There were three main kinds of high schools in Việt-Nam: vocational, comprehensive, and regular. This guide is only concerned with regular high schools.

The aim of the regular high school was to provide students with experiences wide enough so that they could attend universities in many fields. Students went to high school for seven years, starting with grade 6. The seven-year period was divided into 2 cycles: the first cycle includes four years (grades 6, 7, 8, 9); the second cycle included three years (grades 10, 11, 12). In the second cycle, students could choose one of four sections: Section A: experimental sciences; Section B: mathematics; Section C: modern literature; and Section D: classical literature. Students graduating from Sections A and B could attend teachers' training colleges (Đai Học Sủ Phạm), medical schools, dental schools, pharmacy schools, nursing schools, science universities (Đại Học Khoa Học), and technical-vocational universities. Those who majored in modern literature (Section C) preferred to attend teachers' training colleges, liberal arts colleges (Đai Học Vẳn Khoa), law schools, business schools, etc. The classical literature graduates (Section D) attended liberal arts colleges.

Students of the same section and grade studied in the same classroom throughout the year. Teachers moved from one classroom to another, carrying with them whatever teaching aids they needed. Each week, students took from[1]

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[1] Ibid., page 156.

25 to 28 hours of classwork. Teaching methods centered mainly around lectures and memorization, question-answer sessions, and homework. Some lab work, panel discussions, and field trips were conducted in the larger city schools, however most Vietnamese high school students did not have the opportunity to do "experimental learning" such as lab work.

The impact of war was tremendous on the whole educational system, especially on the high school level. Good teachers were drafted into the armed forces. After military training, some were allowed to return to teach in their former schools, but remained as armed forces reserves. Many families moved to big cities to avoid war consequences, so there was a shortage of classrooms. Some elementary schools ran three shifts for sometime (7:30-11:00 a.m., 11:00 a.m.-2:00 p.m., 2:00 p.m.-6:00 p.m.), but most high schools had only two shifts--7:30 a.m.-12:30 p.m. and 1:00 p.m.-6:00 p.m. There were five sessions a day, six days a week; one textbook for each subject was used in each grade. Textbooks were published by the Ministry of Education and by private publishing companies. Libraries were not available in most schools.

Private schools had the same curricula. The students of both systems had to pass the Second Baccalaureat test given by the Ministry of Education at the end of the 12th year before they could go on to universities.

Most of the tests were subjective. Students had to write an essay-type answer on all subjects being asked or tested. In 1974, the first objective Second Baccalaureat Exam was given, and it met with much criticism from both parents and press because there was doubt about its objective validity.

Moral and civic education was emphasized. A good student--beside having good grades in all subjects or most of the major ones, was also morally good. He knew his duties toward his family, his friends, his teachers, and his country. This meant that he respected and took his parents' advice, was loving and helpful to his brothers and sisters, was considerate of his friends, respected his teachers, and practiced his citizen duties.

These are the basic characteristics of the Vietnamese regular high school curriculum and system. Bearing these characteristics in mind, teachers and administrators can use this guide in placing Vietnamese high school students. Knowing the exact content of the subjects that students took in Viet-Nam will help in formulating the new concepts and skills that the refugee students will need to acquire.[1]

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[1] Ibid., page 157.

First Cycle

6th Grade

Subjects	Number of Hours Per Week
Vietnamese	6
History	1-½
Geography	1-½
Civic Education	1
Foreign Languages	6
Physics	1
Chemistry	1
Mathematics	3
Natural Sciences	1
Physical Education	3
Drawing, Handicraft, Home Econmics, Music	3
Total	28 hours

VIETNAMESE (6 hrs a wk)

A. LITERATURE. 1. Prose (2 hrs a wk): Texts to be selected from works of comtemporary writers to match the essay program (see below). 2. Poetry: Excerpts from proverbs, folk songs--Nhị Thập Tứ Hiều; Folk Tales: Excerpts from Truyện Cổ Tích by Nguyễn Văn Ngọc and Nam Hải Dị Nhẩn, Hưng Đạo Vướng by Phan Kề Bính (1 hr a wk). B. DICTATION AND GRAMMAR (1 hr a wk). 1. Dictation: Select descriptive excerpts. 2. Grammar: Sound, tone, syllable; noun, article, demonstrative article, pronoun, verb, adjective; analysis of word classification; punctuation. C. ASSIGNMENTS. 1. Oral Presentation: Ask students to read a book, write a summary, and present it orally to the class (time can be taken from literature lesson--½ hr each wk--for oral presentation). 2. Essay Writing (1 hr a wk): Description (concrete topics); narration (common events); letter writing (concerning visits, common relationships). [All topics should be practical and emphasize description.][1]

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[1] Ibid., page 158.

D. SINO-VIETNAMESE. 1. Demotic Script: Strokes, letter forms, factors influencing the letter forms, length of letters, number and relative place of strokes. [Being with letters having a few strokes then move to the ones with many.] 2. Use: Expressions, idioms, historical references having known words. 3. Short, Essay Sentences and Texts: Excerpts from Tân Quốc Văn Giáo Khoa Thư; Ấu Học Hán Tự Tân Thư; Minh Tâm Bửu Giám; Ấu Học Quỳnh Lâm; Cổ Kim Cách Ngôn Đại Toàn; Thành Ngữ Cổ Sự; Việt Sử Tổng Vịnh; Ấu Học Ngũ Ngôn Thi; Minh Đạo Gia Huấn; Nhi Đồng Tác Văn Sơ Bộ; Mông Học Tạo Cú Thật Tại Dị; Quốc Văn Tinh Hoa; Luận Thuyết Khải Ngộ Tập Sơ Biên; Sơ Học Luận Thuyết Khải Mông; Sơ Học Tân Văn Phạm; Sơ Học Tác Văn Tiếp Quyết; Sơ Học Tác Văn Tân Pháp; Sơ Học Văn Pháp Tất Độc. [Tell stories related to the texts.] 4. Handwriting: Students should count the strokes and write them properly.

HISTORY (1-½ hrs a wk)

A. ELEMENTARY NOTIONS OF HISTORY. 1. Definition: Historical documents, historical time (landmark of time, units, historical eras). 2. Historical Periods: Premedieval and prehistoric. 3. Main Civilizations: Mankind during antiquity, etc. B. VIETNAMESE HISTORY (from the beginning to Ngô Quyền). 1. Origins of the Vietnamese People and Civilization: Old theories, Hồng Bàng family, King Hùng Vương founded the nation [Theories related to Vietnamese activities during this time.]; the archaeologic works, Hòa Bình civilization, Bắc Sơn, Đông Sơn civilization; hypotheses explaining the Vietnamese origin; Lạc Việt's civilization. 2. Thục Dynasty; Triệu Dynasty. 3. Chinese Domination: Chinese domination policy; wars against Lâm Ấp and Nam Chiếu during the Chinese domination; revolutions for independence. 4. Consequences of the Chinese Domination: Import of Chinese culture into Vietnamese society during the domination; changes in Vietnamese civilization.

GEOGRAPHY (1-½ hrs a wk)

A. PHYSICAL GEOGRAPHY. General Study of the Earth: The Earth in space; shape of the Earth; longitudes, latitudes, the Tropics, North and South Poles; movement of the Earth and its consequences (day, night, time, seasons, directions); maps. B. TERRAIN. 1. Mountains: New mountains--folded[1]

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[1] Ibid., page 159.

terrain; old mountains--rock foundation. 2. Highlands: Structure; types of highlands. 3. Deltas: Structure; types. C. WEATHER. 1. Factors: Temperature; wind; rain. 2. Types: Equatorial; tropical; temperature; cold. D. HYDROLOGY. Water Bodies: Rivers, ponds, lakes; ocean (sea water, tides). E. VEGETATION AND ANIMALS. Human Geography: Population and distribution; racial groups; forms of dwelling (in the city, in the country).

CIVIC EDUCATION (1 hr a wk)

A. HUMANISM. 1. Economizing money and material things. 2. Kind treatment to animals. 3. Duty toward oneself, one's body, feeling, intellect; develop one's personality and emphasize self-respect. B. FAMILY LIFE. 1. Ancestors, parents, brothers and sisters, relatives, helpers. 2. Gratitude to the ancestors; the family situation; piety, mutual affection among family members. C. TRAFFIC REGULATIONS. 1. Important regulations when using public roads. 2. Common traffic signs.

FOREIGN LANGUAGES (6 hrs a wk)

A. ENGLISH. 1. Vocabulary, Conversation, Reading: Units 1,2,3 of Book I, English for Today. 2. Grammar: Important grammatical rules in all English classes. [Apply inductive method by using examples leading to the rules.] 3. Assignments: Ask students to create short sentences similar to sample sentences being learned. B. FRENCH. 1. Vocabulary, Conversation, Reading: Recitation, grammar, dictation, written assignments from Le Français Élémentaire by Mauger and Gougenleim, Book I, Lessons 1-28; Cours de Langue de Civilisation Francaise by Mauger, Book I, Lessons 1-14.

PHYSICS (1 hr a wk)

A. WEIGHT. 1. The weight of an object. 2. Vertical line: Application; hanging bob; balancing ruler. 3. Measurement of Weight: Measuring elasticity of a spring; unit--force kilogram; application. 4. Center Weight of a Lamina: Application; equilibrium of an object under gravitational force. (Equilibrium[1]

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[1] Ibid., page 160.

of an object rotating about a horizontal axis or lying on a horizontal surface.) B. FORCE. 1. Direction and Magnitude: Units: force kilogram and Newton. 2. Addition of two vectors of the same or reverse direction. 3. Bearing of types 1, 2, and 3. 4. Balance: Normal and local; measurement of weights by balance; single balancing. 5. Definitions: Specific weights--solids, and liquids.

CHEMISTRY (1 hr a wk)

A. WATER. 1. Natural and Pure Water: Filtration; distillation and condensation; conclude that natural water is a mixture. 2. Properties of Pure Water: Transition of states of pure water; vaporization, liquefaction, and solidification; conclude that melting and boiling temperatures of pure water are invariable during the transitional period. 3. Water Solubility: Demonstrative example of water as a solvent; demonstrative example of water needed for a chemical reaction. 4. Composition of Water: Electrolysis of water to yield hydrogen and oxygen; synthesis of water from hydrogen and oxygen; conclude that pure water is a compound; hydrogen and oxygen are elements. B. OXYGEN. Main Properties: Oxidization; strong oxidization--combustion; slow oxidization--rusting, respiration; conclude that oxidization produces compounds. C. HYDROGEN. Main Properties: Light; burning. D. AIR. Composition; conclude that air is a mixture. E. CONCLUSION. Based on the above lessons, illustrate simple difference between mixture and purity, element and compound.

MATHEMATICS (3 hrs a wk)

A. ARITHMETIC AND ANALYSIS. 1. Dividing an Integer by 2, 5, 9 or 3: Condition for divisibility; test of divisibility by multiples of 9. 2. Fraction of a Quantity: Basic concepts of a fraction; equality of fractions; demonstrations of operations on fractions by numerical examples; decimal fractions. 3. Decimal Numbers: Operations on decimal numbers; quotients of 2 integers or 2 decimal numbers whose difference is a 10th, a 100th, etc. 4. Representation of Numbers by Letters: Explanation of addition, subtraction and multiplication by concrete examples; factorization. 5. A Simple [1]

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[1] Ibid., page 161.

Problem: Solve the 1st degree equation with one unknown (all given coefficients are either fractional or decimal); selection of consistent units; use of letters to represent unknowns; formulation of the equation; rearrangement of terms; simplification; solving the equation. B. GEOMETRY. 1. Lines: Half lines, line segments; measurement of line segments. 2. Planes Configuration: Circle; arc; angle; right angle; measurement of angles by degrees; angles formed by 2 lines; perpendicularity of lines. 3. Equality of Triangles (the first two cases): Right triangles; Isoceles triangles; bisector of a segment; reflection in a line. 4. Equality of Triangles (the third case): Equality of right triangles (all cases). C. ENGINEERING DRAWING. Basic techniques using rulers, compass, triangle, and protractor.

NATURAL SCIENCES (1 hr a wk)

A. CONCEPT OF ECOLOGICAL NICHE. Generalities: Plants and animals, brief study of living conditions and influence of media. B. BOTANY (6 hrs). Class Angiospermae Only: a. Subclass Dicotyledoneae--common bean plant; description of the common bean plant--leaf, stem, root, flower, fruit, seed; seeding and germination; summary of characteristics of a bean plant. b. Subclass Monocotyledoneae--rice plant; description of the rice plant--leaf, stem, root, ear of grain, grain; seeding and germination; summary of characteristics of a rice plant; kinds of rice; rice crops. C. ZOOLOGY (17 hrs). Vertebrates Only (General morphology; head, bones, and teeth; living habits; resproduction): Class Osteichthyes--fish; Class Amphibia--a frog or a toad (one of the two); Class Reptilia--a snake; Class Aves--a chicken or a pigeon (one of the two); Class Mammalia--Order Insectivora: a bat, Order Rodendia: a rat, Order Carnivora: a cat or a dog (one of the two), Order Primates: a monkey. A. EXPERIMENTATION. 1. Bean and Rice Plants: Students are divided into groups; they sow the rice and beans every 7 days and 14 days in order to have plants of different sizes; they bring to the classroom beans, rice and bean and rice plants that they grew at home. 2. Animals: The teacher and the students collect pictures of animals being studied. 3. Homework: The students draw plants and animals.[1]

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[1] Ibid., page 162.

PHYSICAL EDUCATION (3 hrs a wk)

DIRECTED GYMNASTICS. Each session 3 types, each type not more than 2 movements. Exercises requiring perseverance, toughness, and endurance. High jumping, long jumping, discus throwing, 60-m racing. Games involving breathing, jumping, running, throwing. Singing, tying knots, communications (Morse Code), trail markings.

DRAWING

SUMMARY. Drawing geometric figures, real objects at sight; drawing according to a scale. Perspective of cubes. Drawing from memory--animals. Free drawing--objects at sight.

HANDICRAFTS (1 hr a wk)

FOR BOYS. Paper folding. Use bamboo to make lanterns. Paper weaving of birds, animals. Make toys out of cardboard. Bamboo weaving. Book binding.

MUSIC (1 hr a wk) (Summary)

A. VOICE. Breathing; singing by ABCD; music scales. B. MUSIC THEORY. Distinction between a sound and a noise; melody, rhythm, harmony; characteristics of sound; music notes, keys, measure; signs of flats and sharps. C. SINGING. The Vietnamese National anthem; some popular Vietnamese and foreign songs. D. MUSIC HISTORY . History of music; research; musical instruments from China, Greece, India, and Egypt; Chinese and Indian music; Middle Ages. E. LISTENING TO MUSIC. Mythological; Middle Ages; Vietnamese folk songs; descriptive music.

HOME ECONOMICS (1 hr a wk) (For Girls)

A. SEWING. 1. Easy Sewing: Stiches; application. 2. Mending: one, two and four corners. 3. Darning: Long, square, and round edges. 4. Knitting:[1]

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[1] Ibid., page 163.

Stiches. B. HOME CARE. 1. Purpose of Home Economics. 2. Responsibilities and virtues of women in the family. 3. Eating: Daily eating, daily quantity, menus; ways of cooking--roast, stew, fry, brine; milk--preparation, use, sterilization, conservation; eggs--choice, use, and conservation; fat and oil--property and use; dried and fresh fruits--how to cook and conserve them; Cereals, flour; seafoods (treatment for poisoning); meat--conservation; canned foods; drinks--wine and liquer, fruit juice; diet--diet for people recovering from illness. [1]

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[1] Ibid., page 164.

First Cycle

7th Grade

Subjects	Number of Hours Per Week
Vietnamese	6
History	1-½
Geography	1-½
Civic Education	1
Foreign Languages	6
Physics	1
Chemistry	1
Mathematics	3
Natural Sciences	1-½
Physical Education	3
Drawing, Handicraft, Home Economics, Music	3
Total	28-½ hours

VIETNAMESE (6 hrs a wk)

A. LITERATURE. 1. Prose (2 hr a wk): Selections of contemporary writers, especially narration; mixed forms (deseription and narration). 2. Poetry: Study excerpts from Bích Câu Kỹ Ngộ; Bã Huyện Thanh Quan, Folk Tales: Writings by Trường Vĩnh Ký; Huỳnh Tịnh Của (1 hr a wk). 3. Poetry Forms: Lục Bát (six and eight words) and its variations. B. DICTATION AND GRAMMAR (1 hr a wk): [Vocabulary is taught in the text study and in the Sino-Vietnamese lessons.] 1. Dictation: Select narrative excerpts. 2. Grammar: Adverb; preposition; conjunction; exclamation. 3. Sentence: Analysing a sentence (to help students learn how to build sentences). 4. Phrases. 5. Word Construction and Transformation. C. ASSIGNMENTS. 1. Oral Presentation: Guide students to read books, write summaries and present them orally to the class (time can be taken from literature lesson--½ hr each day--for oral[1]

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[1] Ibid., page 165.

presentation). 2. Essay Writing (1 hr a wk): Description (total and complicated); narration (topics requiring imagination, memory, organization techniques); letter writing (harder topics than those in 6th grade, emphasize narration). D. SINO-VIETNAMESE: Same as in 6th grade.

HISTORY (1-½ hrs a wk)

VIETNAMESE HISTORY (from Ngô Dynasty to the end of Minh's domination). The Ngô Dynasty; the Đinh Dynasty; the Anterior Lê Dynasty; the Lý Dynasty--brief higtory of the dynasty, administration, foreign affairs, war against the Tống, the first steps of the advance toward the South, Vietnamese civilization during the Lý Dynasty; the Trần Dynasty--brief history of the dynasty, administration, foreign affairs, war against the Mongolians, advance toward the South, Vietnamese civilization during the Trần Dynasty; the Hồ Dynasty--brief history of the dynasty; administration and reforms of the Hồ Dynasty; Minh's domination--governing policy of Minh and its consequences; the revolts under the Posterior Trần Dynasty; revolution of Lê Lợi.

GEOGRAPHY (1-½ hrs a wk)

A. EUROPE. 1. Western Europe: West Germany; France; England. 2. Mediterranean Area: Italy; Spain. 3. Northern Europe: Sweden. 4. Eastern Europe: Poland; the USSR. B. AFRICA. 1. North Africa: Algeria; Saudi Arabia. 2. Central Africa: Congo. 3. South Africa: Federation of Southern states. A. AMERICAS. 1. North America: the U.S.A. 2. Central America: Mexico. 3. South America: Brazil; Argentina.

CIVIC EDUCATION (1 hr a wk)

LIFE AT SCHOOL. 1. Organization of the School: Administrative staff, personnel, and teaching staff; school building, school property; school regulations and disciplinary committee; student body; parents' association. 2. Duties of the Students: Duties toward the administrative staff; duties toward the teacher (respect, obedience, gratitude); behavior toward friends (competition,[1]

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[1] Ibid., page 166.

group spirit, modesty, mutual respect); school discipline (industry, discipline observance, school honor, taking good care of school properties); student's deportment (clothes, way of speaking, individual honor and worth).

FOREIGN LANGUAGES (6 hrs a wk)

A. ENGLISH. 1. *Vocabulary*, *Conversation*, *Reading*: Review vocabulary learned in 6th grade; study units 4, 5 of Book I and units 1, 2 of Book II. 2. *Grammar*: Same as 6th grade. 3. *Exercises*. 4. *Textbook*: *English for Today*, Books I and II. B. FRENCH. 1. *Vocabulary*, *Conversation*, *Reading*: Recitation, grammar, dictation, written assignments from *Le Francaise Élémentaire* by Mauger and Gougenheim, Book I, Lessons 29-38; Book II, Lessons 1-16; *Cours de Langue Civilisation Francaise*, Book I, Lessons 36-49.

PHYSICS (1 hr a wk)

HYDROSTATICS. 1. Distinction between a liquid and a gas. 2. Definition of pressure, unit: force kilogram/cm^2, N/m^2. 3. Qualitative experiments on pressure in water. 4. Variation of pressure at different depths and specific weights of a liquid: statement the basic first law of hydrostatics. 5. Application: A still open surface of a liquid, connecting tube (containing one liquid), spray, fountain. 6. Presure of a liquid at the bottom of a container. 7. Archimedes' thrust; its application to determine the specific weight of solids and liquids. 8. Floating objects; principle; hydrometer. 9. Air pressure; Toricelli's experiment; atmosphere. 10. Mercury barometer and metal barometer. 11. Open manometer and metalic manometer. 12. Archimedes' thrust in a gas balloon.

CHEMISTRY (1 hr a wk)

A. GENERAL IDEAS ON CHEMICAL TERMINOLOGY. 1. *Use the example* of analysis and synthesis of water to help the students have some idea about molecules and atoms. 2. *General Ideas*: Chemical symbols and formulas; multiple atoms; atomic weight; gram-atomic weight; multiple molecules; molecular weight; gram-[1]

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[1] Ibid., page 167.

molecular weight. B. CHEMICAL CHANGES. 1. Chemical Changes and Laws: Some examples of chemical changes--burning of hydrogen, iron rust; make a distinction of chemical changes and physical changes using simple examples; Lavoisier's experiment; laws of chemical changes deduced from this experiment. 2. Equations of Chemical Reactions: Simple examples about chemical reaction equation; list of valence of some common elements and radicals; application. C. ACIDS AND BASES. 1. Main Properties: Chloric acid; Sulfuric acid; Nitric acid; Sodium hydroxide; Ammoniac. 2. Summary: General ideas about acids and bases.

MATHEMATICS (3 hrs a wk)

A. ARITHMETIC. 1. Practice in factorization of an interger into prime numbers, using simple examples; the largest common divisors and least common multipliers; find the largest common submultiples and smallest common multiples. 2. Application to operations on fractions. B. CALCULUS. 1. Algebraic value (negative, positive, or zero); use concrete problems to present algebraic operations. 2. Inequalities. 3. Linear equations of one unknown with numerical coefficients; problems leading to a linear equation with numerical coefficients. C. GEOMETRY. 1. Review of congruent triangles. 2. Parallelism of lines; angles made by two parallel lines and a secant; angles having parallel sides. 3. Method of Drawing Two Parallel Lines: Definition of polygons--tetragon, trapezoid, paralellogram, rectangle, rhombus, square; characteristics of a parallelogram, a rectangle, a right triangle, a rhombus, and a square--draw these figures; sum of angles of a triangle, a salient tetragon; compare the lengths of a perpendicular line and an oblique line drawn from a point to a line; inequalities in a triangle; cross-ratio of two circles--draw a regular triangle and a right triangle: in a circle, compare the arcs, the chords, the perpendicular distances from the center to the chords--draw the chord and the angles; compare the angle inscribing an arc and the central angle substanding the same arc. Characteristics of the angle of an inscribed tetragon; values of angles of an equilateral polygon--rectangle, octagon, hexagon, triangle--how to draw these figures. D. MATHEMATICAL DRAWING. Line Drawing: Use straight ruler; compass; triangular ruler; decimetric ruler; protractor; copy paper.[1]

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[1] Ibid., page 168.

NATURAL SCIENCES (1-½ hrs a wk: 1 hr of Lecture; ½ hr of lab)

A. LECTURE (25 hrs). 1. Botany: Emphasis on the life cycles of: Gymnospermus--pine tree, vascular plants; lycopsida--moss; thallophytes--algae, fungi; make a classification by evolution, from the simple types to the more complex; summary. 2. Zoology: Phylum Platyhelminthes--tapeworm; Phylum Nemathelminthes --ascarid; Phylum Mollusca--snail, oyster, squid; Phylum Arthropoda--Class Crustacea, Diplopoda, Arachnida, Insecta; characteristics and metamorphosis of their organs for life adaptation; general conclusion; relationships between different organisms--autotrophic, competitive, parasitic, symbiotic lives. B. LAB WORK (12 hrs) 1. In Class: a. Zoology: Morphology and dissection of ascarid, snail, oyster, squid, shrimp, dragonfly; raise a worm or a silkworm to observe the butterfly's life-cycle. b. Botany: Study the leaves, fruits and seeds of a pine tree; study the algae, mushroom, fungi; show students how to press the leaves and paste in an album all learned plants according to their classification. 2. Field Work: a. In the field: Teacher catches live animals, collects plants, and shows students how organisms live. During rice transplant or harvest seasons, the teacher shows students the work of plowing and raking soil, sowing rice, transplanting, harvesting and threshing; kinds of sweet rice. b. In the highland: Teacher catches bees, butterflies. Shows the students how to grow plants and to fertilize them. c. At the local nurseries of the Department of Agriculture: Teacher shows students how to start a new plant, to graft, to transplant. Students write a report in their notebooks after each field trip.

PHYSICAL EDUCATION (3 hrs a wk)

A. DIRECTED GYMNASTICS. Each session 3 types, each type not more than 3 movements; 200-m relay-racing; high jumping; shot putting; long jumping; basketball, volleyball. B. REVIEW. Singing; communication--Morse Code; tying knots. C. FIELD TRIPS. Camping.

DRAWING

SUMMARY. Same as 6th grade plus drawing real objects at sight--pots and vases;[1]

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[1] Ibid., page 169.

perspective of sphere; mixing colors; decorative drawing using geometric lines; drawing from memory--birds; free drawing of objects.

HANDICRAFTS (1 hr a wk)

SUMMARY. Learn to use woodworking tools--the plane, the chisel, the saw, the drill, the T-square, Mortising; make small and simple wooden objects; varnish; mixing and painting.

HOME ECONOMICS (1 hr a wk) [For Girls]

A. SEWING. Making buttonholes; hemming collars; decorative stitches; applying stitches in the making of handkerchieves, napkins; knitting socks, caps, sweaters. B. HOME CARE. 1. Clothing: Selecting fabrics; washing, boiling, ironing, mending clothes. 2. Housing: Direction the house is facing (North, South, East, or West); arranging and decorating the rooms. 3. Furniture: Selecting, cleaning. 4. The Kitchen: Dishes. 5. Lighting: Kinds of lamps. 6. Organization of Housework. 7. Garden: Important rules about growing fruits and vegetables. 8. General ideas about raising animals (chickens, ducks, rabbits, pigs). 9. Income: Expenses, family budget. 10. Social Gatherings (visits, parties, receptions): Important occasions in life.

MUSIC (1 hr a wk)

1. Voice: Same as in 6th grade. 2. Music Theory: Review of 6th grade lessons; 6/8 measure; 32nd and 64th notes; rhythm, syncopation, scale, intervals. 3. Application of Singing Techniques: The Vietnamese national anthem; school anthem, songs involving canon technique; Vietnamese and foreign folk songs; foreign classical songs. 4. Music History: Middle Ages; instrumental music--lute, organ, clavichord. 5. Musical Performance: Vietnamese popular and traditional songs; records of songs involving lute, organ; Bach's suites; records of Wagner, Berlioz, Debussy, Faust, Moussorgski, Mendelssohn.[1]

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[1] Ibid., page 170.

First Cycle

8th Grade

Subjects	Number of Hours Per Week
Vietnamese	6
History	1-½
Geography	1-½
Civic Education	2
Foreign Languages	5
Physics	1-½
Chemistry	1
Mathematics	3-½
Natural Sciences	1-½
Physical Education	3
Drawing, Handicraft, Home Economics, Music	3
Total	28-½ hours

VIETNAMESE (6 hrs a wk)

A. LITERATURE. 1. Prose (2-½ hrs a wk): Excerpts from some subtle and complicated descriptive and narrative forms; argumentative styles of Nguyễn Vản Vĩnh, Nguyễn Bá Học, Phan Kể Bỉnh and excerpts from literary and scientific magazines (Đong Dưỏng Tạp Chí, Nam Phong Tạp Chí, Tri Tân, Thanh Nghị, Tao Đàn). 2. Poetry (1-½ hrs a wk): Excerpts from Lê Thánh Tổng, Nguyễn Bỉnh Khiêm, Lục Vẩn Tiền, Nguyễn Khắc Hiểu. 3. Literary Forms: Songs like Lục Bát and its variations; Đưỡng Luật poetry. B. EXERCISES. 1. Oral Presentation: Students summarize the work of each author, evaluate it according to style, ideas, psychological and moral aspects by answering leading questions; study the authors' lives and times in which they lived. 2. Essay (1 hr a wk): Narration (how to arrange details and change actions); application, report; moral dissertation (of common topics). C. SINO-VIETNAMESE (1 hr a wk).[1]

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[1] Ibid., page 171.

HISTORY (1-½ hrs a wk)

A. POSTERIOR LE DYNASTY. King Lê Thái Tổ to the end of Lê Cung Hoàng Dynasty (1428-1527); internal organization; foreign relations with Chiêm Thành, Lão Qua and Bồn Man; Vietnamese civilization under Posterior Lê. B. MẠC DYNASTY. Brief history; internal and foreign affairs. C. RESTORATION OF THE LE DYNASTY. Lê Dynasty's restoration; dispute between Trịnh and Nguyễn families; advance toward the South by the Nguyễn lords; contacts with Western countries; Vietnamese civilization under the reigns of Trịnh and Nguyễn--society in the North; society in the South. D. DYNASTY OF TÂY SÓN. The revolution; war against the Thanh's army; administration. E. NGUYỄN'S DYNASTY. Restoration of Nguyễn's family; dynasty of Nguyễn, from King Gia Long to King Tự Đức--brief history of the dynasty, administration, diplomatic relations with the neighboring countries and with Western countries; the French invasion--the Treaty of 1862: the loss of three Eastern provinces of South Việt-Nam, the loss of three Western provinces of South Việt-Nam, the first French attack on North Việt-Nam--Treaty of 1874, the second French attack on North Việt-Nam--Treaties of 1883 and 1884; Vietnamese civilization in the 19th century.

GEOGRAPHY (1-½ hrs a wk)

A. ASIA. 1. East Asia: China, Japan, Korea. 2. Southeast Asia: Indonesia, Thailand, Malaysia, Cambodia, Laos. 3. South Asia: India. 4. West Asia: Turkey, Saudi Arabia. B. OCEANIA. 1. Australia and New Zealand. 2. Melanesia and Polynesia.

CIVIC EDUCATION (1 hr a wk)

A. LIFE IN SOCIETY. 1. Mankind. 2. Relationship between the individual and society. 3. Activities and work of the past, present, and future generations. 4. Race, language, habits, customs. 5. National consciousness and patriotism. B. DUTIES TOWARD SOCIETY. 1. Discipline in society (laws and customs, consciousness of freedom, consciousness of justice. 2. Duty to contribute to the progress of mankind. C. RELIGIOUS LIFE. 1. The major religions. 2. Influence of religion in social life.[1]

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[1] Ibid., page 172.

FOREIGN LANGUAGES (5 hrs a wk)

A. ENGLISH. 1. Vocabulary, Conversation, Reading, Grammar: Units 3, 4, 5 of Book II and unit 1 of Book III. 2. Exercises: Ask questions based on the reading; guide students to find the main idea and summarize a section of the text; have students do grammar exercises; have them write a short dictation; later use it as a text for study. 3. Textbook: English for Today, Books II and III. B. FRENCH. 1. Vocabulary, Conversation, Reading, Recitation, Grammar: Dictation, written assignments from Le Français Élémentaire by Mauger and Gougenheim, Book II, Lessons 17-38; Cours de Langue de Civilisation Française by Mauger, Book I, Lessons 36-49.

PHYSICS (1-½ hrs a wk)

A. HEAT. 1. Temperature: Qualitative experiment on expansion. 2. Mercury Thermometer: Celsius temperature scale. 3. Heat Unit: Calories; measuring calories by mixed method; heat solids and liquids; evaluation of heat; melting and freezing; melting temperature; change in volume caused by melting and freezing; melting heat; evaporation and boiling; evaporating temperature; evaporation in a vacuum. B. WORK AND POWER. 1. Units: Joule and Watt; 2. Forms of Energy (give examples of heat and mechanical energy only): Convertibility of heat and mechanical energy.

CHEMISTRY (1 hr a wk)

A. PROPERTIES OF NON-METALS AND METALS. 1. Non-metals: Main properties of: sulfur to show that sulfur is not a metal, chlorine to show that chlorine is not a metal, carbon to show that carbon is not a metal, carbon oxides--carbon dioxide and carbon monoxide. 2. Metals: brief study of: physical and mechanical properties of metals and alloys, common metallurgical process (only reactions investigated); main properties of: sodium, zinc, iron--cast iron, steel (only the properties should be emphasized), copper; summary--simple distinction between non-metals and metals.[1]

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[1] Ibid., page 173.

MATHEMATICS (3-½ hrs a wk)

A. ARITHMETIC AND CALCULUS. 1. Ratio and Proportion: Proportional division; simple interest. 2. Graphs and Equations: Algebraic value of a vector along a directed line; calculus of variations--position determination of a point on an axis; position determination of a point in a plane by orthogonal coordinates; briefly explain about variables and functions, graphs, proportional quantities--equation y = ax, proportional quantities with an initial constant difference--equation y = ax + b (a and b are known numbers), graphs; system of two linear equations with two unknowns, solved by analytical and graphical methods, examples of insoluble and indefinite cases. 3. Introduction to Algebraic Operation: Properties of multiplication, power, multiplication and division; binomial, multiplication and division of binomials; addition of binomial; polynomial of one variable, reducing terms of the same degree simplified forms, product of two polynomials, important equalities; simple exercises of polynomials or rational function. B. GEOMETRY. 1. Explanations by Examples: Inverse theorem, necessary and sufficient conditions and properties; properties of a parallelogram, a rectangle, a right triangle, and a rhombus. 2. Some Examples on Loci: The points at equal distance to two fixed points or two fixed straight lines; the points which are apart from a fixed straight line by a given distance. 3. Applications to Drawing Problems: A circle circumscribing a triangle; a circle inscribing a triangle; the tangent to a circle drawn from a given point. 4. Multiplication of a Segment by a Fraction: Ratio of two segment; points dividing a segment according to a given ratio. 5. Formulas: Thales' theorem; similar triangles; formulas in a right triangle; formulas in a circle cut by two lines drawn from one point. 6. Application to the drawing of the multiplicative average segment, the length of which is given as the square root of two given segments; find the sides and medians of a square, equilateral hexagon and an equilateral triangle in terms of the radius of the circumscribing circle. C. MATHEMATICAL DRAWING. 1. Use of Tools To Draw Geometry Figures: Straight ruler, triangle, compass, decimeteric ruler, protractor, ink pen. 2. Draw a curve going through some given points, using carbon and ruled paper to milimeter scale.[1]

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[1] Ibid., page 174.

NATURAL SCIENCES (1-½ hrs a wk: 1 hr of lecture; ½ hr of lab)

A. LECTURE (25 hrs). 1. Shape and General Composition of the Earth: General introduction on the shape and appearance of the Earth; emphasis on the role of airplanes and satellites; atmosphere, water, living organisms around the Earth; crust, mantle, and core of the Earth; definition of geology. 2. Activities of the Earth and Its' Consequences: Structure of the crust--comparison of soil rock; erosion of the crust by weather, wind, running water, sea waves, ice; deposits (caused by wind, stream, river, sea, ice, living organisms); formation of sedimentary rocks; movement of the crust--folding, stress and strain, metamorphism and metamorphic rocks; formation of volcanoes--lava on the surface, underground; fissures, collapses, and earthquakes. 3. Mineral Treasures: Underground water, characteristics and extraction; soil and rock used in industry--rock, gravel, pebbles, sand, mud, clay, sulfur and phosphate salts; jade and precious stones; metal ores--iron, copper, lead, zinc, aluminum. 4. History of Life: Historical transformation of living beings through the ages--precambrian (unicellular organisms) through cenozoic (multicellular organisms); evolution of plants and animals through the ages; fuel generated by dead organisms--coal, oil, gas.

B. LAB WORK (12 hrs). 1. Class Work(10 to 12 1-hr sessions): a. Soil and rocks--compare samples of soil collected in the area for color, general composition, origin, use; compare soil with rock for hardness, grain, crystallization, natural cement, grinding of rock into soil, use cement to make samples of man-made sand; compare samples of crystallized conglomerate, sandstone, mudstone in regards to form, arrangement, color, composition; compare sandstone with limestone in regards to grain, hardness, composition (use vinegar, observe and explain the effervescense), compare the way they were formed; compare mudstone with mica schist and describe the metamorphism from mudstone to mica schist, conclusion on the metamorphic phenomenon, compare it with bricks and tiles to draw conclusion on artificial transformation, do the same with limestone and marble; compare basalt with mudstone (schist) in regards to layers, hardness, and color, grind both kinds and compare hardness of cement in mudstone and lava rocks; compare volcanic rock with granite--color, grain, structure, deduce their origins. b. Ore--compare common metal ores in Viet-Nam--iron, lead, copper, coal--observe color, hardness, arrangement, find trace of vegetation, its compactness, experiment on the composition of coal. 2. Field Trips: Students[1]

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[1] Ibid., page 175.

are taken to an open field and shown how to detect the direction of the wind, guess the temperature, observe the fog; how to observe the stream, the river or rivulet; deposition and erosion; if near the sea, they observe sand dunes, sea coast, and effect of the sea waves; they also observe an area which has foldings of sedimentary rocks, or an extinct volcano, or a stone mine; if possible, they are taken to observe a brick or ceramic factory, or where the sand pebbles are washed. 3. Collection: Students make an album of geological pictures or photographs; in each field trip, the students learn to collect samples of rocks, pebbles, and soil of that area. [In general during the lab work, the students are taught how to observe, to think and compare, to describe accurately by writing and drawing.]

PHYSICAL EDUCATION (3 hrs a wk)

A. DIRECTED GYMNASTICS. Techniques of high jumping, long jumping, shot putting, 80-m racing; basketball, volleyball, soccer; organize competitive games.

B. REVIEW. Singing; typing knots; communications--Morse syllables; trail markings; games involving running, jumping, throwing, balancing.

DRAWING

SUMMARY. Same as 7th grade plus lettering; water color painting of flowers, fruits, leaves, birds; drawing of scenery in the countryside; learning the methods of drawing the human body, its proportion, measurement.

HANDICRAFTS (1 hr a wk)

METALWORK. Learn to use metalworking tools; how to heat iron, give it a round, square, or rectangular shape, make a pointed end; harden the steel; learn to solder iron objects--tray, kettle, plate, oil container; drill holes in tin, clinch nails.[1]

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[1] Ibid., page 176.

HOME ECONOMICS (1 hr a wk) [For Girls]

A. SEWING. Embroidery stitches applied to decoration of handkerchieves, bibs, caps; cutting and sewing children's clothes. B. CHILD CARE. Marriage; health care during pregnancy; preparation for the mother; preventing diseases; diet and work of the mother; the newborn baby; breast and bottle feeding; clothing; solid foods; health care; objective of child care. C. HOME CARE (in the countryside): Garbage disposal; gardening; vegetables--selection of seeds, germination, weeding; fruit trees; animals--fowls, bees.

MUSIC (1 hr a wk)

Voice: Same as 7th grade. Music Theory: Review the program of 6th and 7th grades; tonal notes and modal notes; a major and F# minor; E^b major and C minor; measures 2/2, 3/2, 4/2, 3/8, 9/8, 12/8; singing 1, 2, and 3 voice songs; rhythmic reading; musical dictation. Application of Singing Techniques: Memorize the national anthem and the school anthem; Vietnamese and foreign folk songs. Music History: Classical instrumental music, sonata, chamber music, symphony, dramatic music in Italy in 17th century, ballet, opera, Mozart opera. Musical Performance: Musical play of Italy; records--musical plays of Lully, Rameau, operas of Gluck, Mozart's sonatas, works of Handel, Bach, Haydn, Beethoven.[1]

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[1] Ibid., page 177.

First Cycle

9th Grade

Subjects	Number of Hours Per Week
Vietnamese	6
History	1-½
Geography	1-½
Civic Education	2
Foreign Languages	5
Physics	1-½
Chemistry	1
Mathematics	3-½
Natural Sciences	2
Physical Education	3
Drawing, Handicraft, Home Economics, Music	3
Total	30 hours

VIETNAMESE (6 hrs a wk)

A. LITERATURE. 1. Prose (2 hrs a wk): Argumentative style of Phạm Quỳnh, Trần Trọng Kim, Phan Chu Trinh; excerpts of their writings from magazines. 2. Poetry (1 hr a wk): Study excerpts from Đoạn Trường Tân Thanh, Nguyễn Công Trứ, Nguyễn Khuyến, Trần Tế Xường, Cao Bá Quát, Tôn Thọ Tường, Phan Văn Trị; Poems of the patriots like Phan Bội Châu, Phan Chu Trinh. 3. Literary Form: Hát Nói. 4. Literature: General study of Vietnamese literature from the beginning up to modern times (5 hrs for the whole year). B. EXERCISES. 1. Oral Presentation: Summarize the work of each author, evaluate it in regards to style, ideas, psychological and moral aspects by answering leading questions; study the lives and times in which the authors lived. 2. Essay (2 hrs a wk): General dissertation; moral dissertation; literary. C. SINO-VIETNAMESE (1 hr a wk).[1]

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[1] Ibid., page 178.

HISTORY (1-½ hrs a wk)

A. VIETNAMESE HISTORY (from 1884 to 1945). 1. The French Domination: Governing policy of the French; reaction of the Vietnamese people in regards to the French domination--movements against the French: Cần Vướng Movement, Duy Tân Movement; movements against the French from 1914 to 1930--anti-French movement during World War I, anti-French movements from 1919 to 1930, revolt of the Vietnamese Kuomingtang, anti-French movement from 1930 to 1939; pro-French movements; changes occurred in Vietnamese civilization under the French domination. 2. Việt-Nam in the Second World War: The Japanese in Indochina; the French-Japanese policy in Việt-Nam; movements against the French and the Japanese; Coup d'Etat in March 9, 1945. B. WORLD HISTORY. 1. Western Expansion: The development of Western industry and the expansion of colonial movement; the Asian countries facing Western countries' colonial expansion movement--China: From Opium War to Tân Hợi revolution, Japan: From King Minh Trị to World War I, India: From 1857 to World War I; the First World War: its cause and effect. 2. The World between the Two World Wars: Internal changes of the Western big powers--the U.S., England, France, USSR, Germany, Italy; the countries of the East--Japan, China, India, and countries in the Far East. 3. The Second World War: Cause and effect.

GEOGRAPHY (1-½ hrs a wk)

VIỆT-NAM. 1. General Aspects: Location, boundaries, shape, area. 2. Physical Geography: Terrain--mountains and highlands, delta, sea coast and sea bottom; climate; rivers; vegetation. 3. Human Geography: Ethnic groups in Việt-Nam; population (census, changes, migration, distribution); politics. 4. Economic Geography: Agriculture (farming, husbandry, fishery); arts and crafts, industry; communication, trade.

CIVIC EDUCATION (2 hrs a wk)

PRIVILEGES AND RESPONSIBILITIES OF THE CITIZENS. 1. Human Rights: The International Declaration of Human Rights--causes, content, influence. 2. Civil Rights: Definition of a citizen; basic rights and limitations--freedom of[1]

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[1] Ibid., page 179.

individual rights of safety, privacy, having one's honor respected, movement, lodging; freedom of thought,religion, culture and education, speech, assembly, politics (to join the government, to vote, to be a candidate); economic and social aspects of freedom in regards to right to work (freedom to join labor unions and to have strikes), right to private property, free enterprise, right to social welfare. 3. Citizen's Responsibilities: Duty to defend one's country; duty to defend the country's contitution and laws; duty to fulfill one's military obligations; duty to pay taxes.

FOREIGN LANGUAGES (5 hrs a wk)

A. ENGLISH. 1. Vocabulary, Conversation, Reading, Grammar: English for Today, Book III, Units 1, 2, 3 (the first 15 lessons); encourage students to read simplified versions written in the contemporary style (such as Tales from England, 1st and 2nd degrees, Longmans Series, etc.) [Attention: Ask the students to find the main ideas, to summarize and to answer questions orally related to the lessons.] 2. Exercises: Answer questions related to the reading; ask the students to answer questions orally relating to the main idea and to summarize each paragraph; do grammar exercises; write dictation and study it from English for Today, Book III. B. FRENCH. 1. Vocabulary, Conversation, Recitation, Grammar, Dictation: Text study from Cours de Langue de Civilisation Française by Mauger, Book I, Lessons 50-65, Book II, Lessons 1-20. 2. Written Exercises: Answer questions based on reading and dictation; answer questions related to the same topic; write sentences following the teacher's sample ones.

PHYSICS (1-½ hrs a wk)

A. ELECTRICITY. Properties of directional current; atomic structure--electrons, nuclei (omit nuclear structure), ions, ionization; chemical effect of a current--qualitative law, application; chemical effect of a current--Faraday's law; heat effect of a current--Joule's law, application: light, stove, iron, fuse; resistance of a pure wire of uniform cross section--change of resistivity with temperature, rheostat and variable resistance; voltage--Ohm's law across a pure resistance; dry battery--Volta and Leclanche; principles of a lead battery. B. OPTICS. Linear propagation of light, application--dark shadow, opaque shadow, solar eclipse, lunar eclipse; light reflection, plane mirrors, statement[1]

[1] Ibid., page 180.

of Descartes-Snell law, application--periscope, kaleidoscope; experiments on light refraction; converging lens, imaging, Descartes' formula; application--converging lens: camara, floodlight, magnifier.

CHEMISTRY (1 hr a wk)

INTRODUCTION TO ORGANIC CHEMISTRY. 1. Basic concepts of organic compounds--definition, general properties. 2. Hydrocarbons--by-products of petroleum and coal. 3. Study of methane, acetylene, benzene. 4. Alcoholic fermentation--ethanol. 5. Acidic fermentation--acetic acid. 6. Esterization--study of some common esters, usage of ester. 7. Hydrolysis--saponification, application to the making of candles and soap. 8. Introduction to carbohydrates--glucose, saccharin, cellulose, starch.

MATHEMATICS (3-$\frac{1}{4}$ hrs a wk)

A. ARITHMETIC AND CALCULUS. 1. Examples: In geometry or physics leading to the following equations: $y = x^2$, $y = ax^2$, $y = \frac{1}{x}$, $y = \frac{a}{x}$ where a is a constant; table of specific values; graph. 2. Definition of Square Root: Finding an approximate decimal value for a square root, using table of square values, direct method. 3. Solve a quadratic equation with one unknown, by analytical method and graphical method; examples leading to quadratic equation with numerical coefficients; use of graphs and tables. B. GEOMETRY. 1. Sine, Consine and Tangent of an Acute Angle: Trigonometric formulas in a right triangle; formulas relating sine and cosine of an angle; use of the sine, cosine, and tangent tables. 2. Area Units and Area: A rectangle, a triangle, a trapezoid, and other polygons; ratio of areas of two similar triangles; length of an arc and area of a circular sector (without making use of the two formulas: $L = 2\pi R$ and $S = 2 \pi R^2$). C. SPACE GEOMETRY. Determination of a plane; introduction to parallel lines and parallel planes; definitions of a bi-hedron, a polyhedral cylinder and a parallelepiped; perpendicular lines and perpendicular planes; right cross-sections of a bi-hedron, and a polyhedral cylinder; formation of rotational rigid bodies (cylinder, sphere, cone); sphere (a brief study is intended to understand its applications to the study of the Earth and other common applications); practice in evaluating area and volume (e.g. parallepiped,[1]

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[1] Ibid., page 181.

polyhedral cylinder, cylinder, cone, sphere); practice in unit conversions. D. MATHEMATICAL DRAWING. Draw by hand, drafts of several simple objects; draw the same drafts using pencil, pen, and other drawing aids according to a given scale; draw simple patterns.

NATURAL SCIENCES (2 hrs a wk: 1 hr lecture and 1 hr lab)

A. LECTURE. 1. Human Anatomy, Physiology and Hygiene: Generalities of animal cells and tissues; coordinative functions; hygiene of each function; motor system (musculo-skeletal)--bones (not the skeleton), muscles (not the names of the muscles); sensory system--cerebro-spinal system: brief study of the neurons, the spine, the brain (draw simple sketches to show direction of neurons in the motor and sensory pathways; the senses--general studies of the senses, especially the skin and the tactile sense; nutritional system--hygiene of each function; food--emphasis on the composition and the nutritional value of all kinds of foods and vitamins, and food's influence on health; digestion; circulation (very brief study on lymph); respiration; excretion (emphasis on mine excretion); diet (emphasis on physiological aspect, the anatomic aspect should be simplified). 2. General Microbiology: Brief study of micro-organisms--viruses, fungi, protista; their shape, structure, and living habits (emphasis on the effects caused by micro-organisms in fermentation, in decay); discuss food conservation by freezing and sterilization; general study of viruses and viral diseases. 3. Contagious Diseases: Research on cholera and tuberculosis; study the effects caused by disease germs; sensitivity and immunity; preventive measures--vaccination treatment--sero- and chemotherapies), (emphasis on the use and danger of antiseptics and antibiotics); some other contagious diseases--smallpox, malaria. B. LAB WORK. 1. Observe: The epithelial cell inside the human cheek, or of a frog; blood cells (erythrocytes and lencocytes); one kind of microbe--weed bacillus. 2. Study the Bone: Transversal and longitudinal sections of a fresh bone. 3. Study the Muscles: A skinned frog; experiment to prove the elasticity and contraction of the frog's leg muscles. 4. Observe a Brain: Pig's or ox's; experiments on frog's reflex movements. 5. Dissect: A mouse to study the digestive and reproductive systems; observe the shape of a pig's heart and dissect the heart.[1]

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[1] Ibid., page 182.

PHYSICAL EDUCATION (3 hrs a wk)

A. DIRECTED GYMNASTICS. Racing and breathing control; high jumping; long jumping; shot putting; 100-m relay racing; techniques of volleyball, basketball, soccer. B. REVIEW. Singing; tying more complicated knots, communications by whistle; trail markings; finding directions with watch, the sun, the moon, and the Dipper; games.

DRAWING

SUMMARY. Drawing still life (fruits, statues) with pencils, coal, or paint; decorative drawing of household objects; drawing sketches of objects, people, and animals; review perpective; enlarge a small sketch, then paint it.

HANDICRAFTS (1 hr a wk)

SUMMARY. Learn to use tools of a blacksmith; learn to file iron; learn to use electrical tools, to wire a new current, a fuse, a bell, a light bulb; make a joint, solder a joint (the light bulb and the bell will be attached to a piece of wood, not on the wall); put the bicycle parts together, take them apart, repair the bicycle.

HOME ECONOMICS (1 hr a wk) [For Girls]

A. SEWING. Cutting and sewing of Vietnamese blouses and pants, underwear; Vietnamese, Chinese, Japanese embroidering. B. CHILD CARE. Illnesses and caring for the ill; emergency care; family medicine cabinet; baby's common sickness; social welfare institutions--orphanages; agencies to protect mother and child. C. HOME CARE. Family resources; kinds of expenses--saving, family budget; social welfare; social etiquette and family events--marriage, birth, funeral; letters of condolence or compliment.

MUSIC (1 hr a wk)

1. Voice: Same as the 6th, 7th, and 8th grades. 2. Music Theory: Review [1]

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[1] Ibid., page 183.

the 8th grade program; classical modes; tonality, modality, modulation; transposition; short dictation with alterations; vocal and instrumental canon. 3. Application of Singing Techniques: Vietnamese and foreign folk songs; songs of Weber. Wagner, Moussorgski, Franck, Fauce. 4. Music History: Music of Lied, Schubert,Schumann; piano music of the 19th century; German operas by Weber, Wagner; Russian operas by Moussorgski, Borodine, Rimsky-Korsakow. 5. Music Performance: Piano music (records) by Mendelssohn, Schumann, Liszt, Chopin, Schubert, Brahms, Berlioz, Weber, Wagner, Rossini, Verdi.[1]

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[1] Ibid., page 184.

Second Cycle

10th Grade: Experimental Science Major (Section A) and Mathematics Major (Section B)

Subjects	EXPERIMENTAL SCIENCE (A) Number of Hours Per Week	MATHEMATICS (B) Number of Hours Per Week
Vietnamese	3	3
History	2	2
Geography	1	1
Civic Education	2	2
Philosophy	0	0
First Foreign Languages	4	4
Second Foreign Languages	4	4
Classical Languages	0	0
Physics	3	3
Chemistry	1-½	1-½
Mathematics	4	6
Natural Sciences	3	1
Physical Education	3	3
Total	30-½ hours	30-½ hours

VIETNAMESE (3 hrs a wk)

A. LITERATURE. 1. Literature: Same as Modern Literature Major but more general; study excerpts of Sino-Vietnamese poems under Hồng Đức's Dynasty, Nguyễn Bỉnh Khiêm, or oration of war deads; excerpts of: Chinh Phụ Ngâm Khúc, Cung Oán Ngâm Khúc, Đoạn Trường Tấn Thanh. B. DICTATION AND GRAMMAR. Not applicable to 10th grade. C. EXERCISES. Oral presentation and essays, same as Modern Literature Major.

HISTORY (2 hrs a wk): Same as Modern Literature Major.[1]

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[1] Ibid., page 185.

GEOGRAPHY (1 hr a wk): Same as Modern Literature Major.

CIVIC EDUCATION (2 hrs a wk): Same as Modern Literature Major.

FIRST FOREIGN LANGUAGES (4 hrs a wk)

A. ENGLISH. Same as Modern Literature Major but more general; emphasize science excerpts and conversation; literature. B. FRENCH. Same as Modern Literature Major, except French literature and essay.

SECOND FOREIGN LANGUAGES (4 hrs a wk)

A. ENGLISH. Same as Modern Literature Major. B. FRENCH. Same as Modern Literature Major; textbook: Cours de Langue de Civilization Française by Mauger, Book I, Lessons 1-35.

PHYSICS (3 hrs a wk)

A. FORCE. 1. Force: Measurement of force by the extension of a spring; units of forces--force kilogram, Newton; experimental study of converging forces, addition and resolving of forces; experimental study of parallel forces, addition and resolving of forces, force couple; movement of a force about an axis (special cases: forces perpendicular to or parralel with the axis). 2. Balance: Characteristics of a balance--reliability, accuracy, sensitivity; balancing by comparisons; precision balances; Roman and Roberval balances. 3. Practical Concepts of weight: Unit--kg; definition of specific weight and specific volume of solids and liquids; unit; definition of liquid specific weight with respect to water. 4. Work: Done by a force of constant direction and magnitude; work done by an applied force or a frictional force; unit--Joule; power; unit--Watt. 5. Simple Engines: Pulley, inclined surface, crane; the law of work conservation; efficiency. B. HYDROSTATICS. 1. Definition of Pressure: Unit--N/m^2; pressure at a point in liquid; difference of pressure between points in a liquid; pressure at a point on the wall or the bottom of a liquid container. 2. Results and Applications: Open surface of the liquid; interface separating two undissolved[1]

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[1] Ibid., page 186.

liquids; connecting tube containing one type of liquid of two undissolved liquids; Pascal theorem; compressor using water. 3. Archimedes' Principle: Applied in determining specific weight; floating objects, aerometer. C. THERMOMETRY. 1. Qualitative experiments on expansion. 2. Temperature: Mercury thermometer; Celsius and Kelvin temperature scale. 3. Expansion of Solids: Coefficients on longitudinal and transverse expansion (definition and formula); application. 4. Expansion of Liquids: Virtual expansion and real expansion; coefficient of virtual expansion and real expansion (definition and formula); expansion of water. Change in specific weight of a liquid with temperature. 5. Isothermal Opression of Gas: Law of Boyle-Mariotte; isobaric expansion of gas; change in pressure with volume being held constant--Charles and Gay Lussac's laws; ideal gas formulas; specific weight of gases. D. CALORIMETRY. 1. Heat: Units--calorie, Joule; specific heat of solids and liquids. 2. Vaporization: In a vacuum, in a gas; boiling; maximum pressure; lateral heat of vaporization.

CHEMISTRY (1-½ hrs a wk)

A. FUNDAMENTAL THEORY. 1. Atomic Structure: Elements; principal particles of atom; Bohr's atom; atomic level; atomic number; isotopes; definition of an element; description of the Mendeleer's periodic table (revised table); molecules; elements; compounds and mixtures. 2. Chemical Bonds: Ionic bond--ionization in a solution; valence bond, shared valence bond, polarization of valence bond; negativity table; Van der Waal bond; interpretation of physical states based on chemical bonds; distinction between metal, non-metal, and metalloid. 3. Acid, Base, and Salt: Definition of acid, base, and salt according to Arrhenius Properties of acids, bases, and salts; law of Berthollet. B. GASES. 1. Oxygen and Oxides. 2. Chlorine and Chlorous Compounds: Hydrogenic chlorides, hypochlorites, chlorates. 3. Sulfur and Its Compounds: Sulfurous dioxide and sulfite; sulfuric acid and sulfate. 4. Nitrogen and Its Compounds: Ammoniac and ammonium; Nitric acid nitrate. C. ANALYTICAL CHEMISTRY. Analysis of acids and bases.

(Applicable from school-year 1970-1971)

1. Basics: Water; hydrogen; oxygen; air; nitrogen; compounds and mixtures; introduction to the atomic theory; nomenclature; atomic weight; molecular weight;[1]

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[1] Ibid., page 187.

chemical equation; lime; salt; ammoniac; nitric acid; carbon; carbonic anhydride; carbon oxide; silicon; silicate. 2. Statements of the Fundamental Laws in Chemistry: Chlorine; hydrochloric acid; acidic radical; decolorizing chlorides; Javel solvent; sulfur; sulfurous anhydride; sufuric acid; base radical.

MATHEMATICS (6 hrs a wk) [For Mathematics Major (B) only; same for Experimental Science Major (A) except 4 hrs a wk]

A. PLANE GEOMETRY. 1. Lines: Straight line; half line; line segment; half plane; angle; perpendicularing of lines; reflection about a straight line. 2. Figures: Triangle--Isosceles, equal triangles, equal right triangles; inequalities in a triangle; perpendicular and oblique segments drawn form a point to a line; locus of points at an equal distance from two given points or from two given lines; parallelity of lines; proporties; sum of angles of a triangle and of a convex polygon; parallelogram; reflection about a point; equivalent vectors; translation. 3. The Circle Intersection of a Circle and a Line: Tangent; chord and arc; cross ratio of two circles; methods of drawing a line and a circle; angle and chord subtending an arc from the center; angles from the center and from a point on the circle subtending the same arc; inscribable tetragon; locus of points subtending a fixed line segment under a constant angle. 4. Ratio of Two-line Segment: Points dividing a segment by a given ratio; algebraic ratio of two parallel vectors; point dividing a segment by a given algebraic ratio; Thales' theorem; isometric triangles; similarity--similarities of a line, a circle; centers of similarity of two circles; locus of points the distances of which from two given lines form a given ratio. 5. Conjugate Points; Conjugate Pencil: Two segments of a triangle side determined by the bisector of the opposite angle; locus of points the distances of which from two fixed points form a given ratio. 6. Trigonometric Formulas: Sum and difference of squared distances from one point to two others; application to problems relating to locus and drawing; power a point with respect to a circle. 7. Sine, Cosine, and Tangent of a Convex Angle (Acute or Obtuse): Algebraic value of the projection of a vector with respect to an axis; how to use sine, cosine, and tangent tables; formulas involving sides and angles of a right triangle: $a^2 = b^2+c^2-2bc \cos A$ and $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = 2R$ in a triangle; formulas on the area of a triangle. 8. Equilateral Polygon: Square; octagon;[1]

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[1] Ibid., page 188.

hexagon; equilateral triangle; circumference of a circle; length of an arc; radian; approximate value of sinx, tanx and cosx (x and $1-\frac{x^2}{a}$) for a small angle x is terms of radians; revision on methods to evaluate plane areas; area of a circle and sector. B. CALCULUS. 1. Algebraic Numbers--Negative, Positive, and Zero: Operation on algebraic numbers; basic properties of these operations; number with positive integral power; significance of negative power and fractional power; ratios and formulas on ratios; binomial and polynomial; reduction of polynomial quotient having common binomial(s); product of a binomial and a polynomial; examples on polynomials. 2. Vector: Algebraic value of a vector; Chasles formula; position of a point determined by its abscissa on an axis or its coordinates in a plane. 3. Dependent and Independent Variables: Increment of a variable; a function defined in a range; functions of the same or reverse variation; variation and graph of first degree functions; tangential angle; variation and graph of functions: $y = x^2$; $y = ax^2$; $y = \frac{1}{x}$; $y = \frac{a}{x}$. 4. Linear Equation and Inequality with One Unknown: Solution and discussion; a system of two linear equations with two unknowns; solution and discussion. 5. Quadratic Equation with One Unknown: The delta (b^2-4ac); existence and determination of roots; relationships between two roots; sum and product of roots; sign of roots; quadratic equation derived from two given roots; determination of two numbers, given their sum and product--discussion; quadratic trinomial; reduction into factors; sign of a trinomial; quadratic inequality; problems involving quadratic equations.

NATURAL SCIENCES (3 hrs a wk, for Experimental Science Major)

A. LECTURE. 1. Introduction to Geology: Definition; specialized field; aim; application; research methods; the Earth in the universe; the new hypothesis of Weizocker. 2. Geological Phenomena: By external causes--air, underground water, turbidity currents, stream, river, sea, snow and glacier; by organisms--corals; by internal causes--volcano, earthquake; events leading to change in Earth's surface; formation of mountains (counter current hypothesis); Earth structure. 3. Mineralogy: Introduction; some basic minerals--quartz, feldspar, mica, calcite, dolomite. 4. Rock Study: Generalities of rocks; igneous rocks--granite and basalt; some other rocks relating to these two; sedimentary--a sample of sandstone, siltstone, limestone, evaporites; metamorphic[1]

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[1] Ibid., page 189.

rocks--metamorphism, a sample of gneiss and of marble. 5. Paleo-Geology: Definition of fossils; main findings of paleontology; basic principles in studying the Earth's strata; how to determine relative and absolute age; history of geology in Viet-Nam; evolution of living organisms; evolution theory; examples of the past--horse and humans. 6. Application of Geology: How to select materials for construction--rocks, pebbles, sand, mud, clay; how to slake lime and manufacture cement; how to make bricks and roofing tile; how to find underground ore--brief description of some methods such as using magnetism, electricity, seism; foundation of roads; hydroelectricity; how to bring up underground water. B. LAB WORK. 1. Geological Phenomena: Sedimentation--use a glass pan, put in sand, mud, clay and observe the speed as well as the order of sedimentation; law of sedimentation--piling up or spreading evenly; dune formation--make a sand-bank on the table, then blow from the low to the high side to see how sand moves; observe the sand of the bank and compare it with the smooth pebble at the river; press horizontally a piece of clay to explain the force which formed mountains; do the experiment with a connecting tube to explain the spurt of water from a well; observe ice--put the cubes next to one another to see them stick together (ogglomeration), break ice to have a sharp piece and scratch a piece of hard clay or a tile to test the hardness; making cement--use pebbles mixed with cement to see them harden, compare with natural cement in red laterite. 2. Mineralogy Study: Observe the color and measure the relative refractive index by putting the rock into solutions such as water, benzen, gasoline, oil; observe the relative hardness by scratching the surface, and measure the specific gravity with a scale; observe the common ores--iron, copper, zinc, and lead; burn some calcite to make quicklime and experiment with acid, draw chemical reactions, blow in lime solution to make a solution of hydroxide calcium. 3. Rock Study: Observe sedimentary rocks--conglomerate, sandstone, shale, siltstone; compare their grains; observe their strata comformation, observe cement; observe limestone and dolomite--dissolve them in acid, in water; observe a sample of granite--compare the grains of crystals, find main minerals by their colors and purities, compare it with a diorite or basalt sample (color, grain, purity), compare with a piece of glass (olivine, serpentine); compare a mica schist with a schist--degree of crystallization; compare a granulite with a granite; they are similar in purity but different in strata settlement. 4. Paleontology: Observe a fossil--form, mineral structure, purity (limestone, sand, clay, schist), draw conditions of fossilization; describe some existing[1]

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[1] Ibid., page 190.

fossils around the school.

PHYSICAL EDUCATION (3 hrs a wk): Same activities as in former grades, more advanced.[1]

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[1] Ibid., page 191.

Second Cycle

10th Grade: Modern Literature Major (Section C) and Classical Literature Major (Section D

Subjects	MODERN LITERATURE (C) Number of Hours Per Week	CLASSICAL LITERATURE (D) Number of Hours Per Week
Vietnamese	5	5
History	2	2
Geography	1	1
Civic Education	2	2
Philosophy	0	0
First Foreign Languages	6	6
Second Foreign Languages	6	0
Classical Languages	0	6
Physics	½	½
Chemistry	½	½
Mathematics	1	1
Natural Sciences	1	1
Physical Education	3	3
Total	28 hours	28 hours

VIETNAMESE (5 hrs a wk)

A. LITERATURE. 1. Folk Literature: Sino-Vietnamese literature during the Trần Dynasty and up to Nguyễn Du's work; introduction of Chinese works written by the Vietnamese during the same period. 2. Forms of Literature: Couplet, essays, funeral oration. 2. Excerpts To Be Studied: Classical operas--Kim Thạch Kỹ Duyền, Địch Thanh Ly Hận, Tượng Kỹ Khí Xa; Poems under Hồng Đức's Dynasty, Nguyễn Bĩnh Khiêm, Phạm Thái, Nguyễn Huy Lượng, Lề Quí Đốn, Đặng Đức Siều, Nguyễn Văn Thảnh; longer ones from: Chinh Phụ Ngâm Khúc, Cung Oán Ngâm Khúc, Hoa Tiên, Đoạn Trưởng Tân Thanh. B. DICTATION AND GRAMMAR. Not applicable to grade 10. C. EXERCISES. 1. Oral Presentation by Students: On[1]

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[1] Ibid., page 192.

works and authors studied in Part A. 2. Essay: General dissertation on topics requiring students to use their knowledge of other subjects such as history, geography, civic education, moral education, sciences, and relate them to practical social situations and events; literary dissertation.

HISTORY (2 hrs a wk)

VIETNAMESE HISTORY FROM 1407 TO 1802. 1. Period the Minh's domination (Chinese); policy and administrative organization of the Minh; infiltration of the Chinese culture; consequences. 2. Lê Lợi's Uprising. 3. Post Lê Dynasty: Brief history of the period from Lê Thái Tổ's reign to 1527; administration--organization of the administration, law, organization of the national defense, economy--finance, culture, social aspects; foreign affairs--relations with China, with other neighboring countries; advance toward the South--war against the Chiêm, movement to migrate the people to the new area and to cultivate it; social aspects of the Đại Việt (name of Việt-Nam at that time) life, social customs, and events. 4. The Mạc Dynasty. 5. The Restoration of Lê Dynasty: The governments of the North and the South. 6. Civil war between the Trịnh and the Nguyễn families. 7. Đại Việt society under the Reigns of Trịnh and Nguyễn: In the North--internal administration, daily life and society; in the South--internal administration, advance toward the South, occupation of the Chiêm's land and Chân Lạp, migration and land clearance, social activities; contact with the West (emphasize cultural effects). 8. Dynasty of Tây Sơn: The revolution; King Quang Trung destroyed the Thanh's army; diplomatic relations with China; Vietnamese society under Tây Sơn's Dynasty. 9. Nguyễn Ánh's national unification.

GEOGRAPHY (1 hr a wk)

A. PHYSICAL GEOGRAPHY. 1. Generalities of the Earth: Origin of the Earth; movement of the Earth (day and night, hour, seasons, directions). 2. The Earth's Geology: Geological periods; kinds of rocks; earthquakes; erosion and soil deposits. 3. Study of Terrain: Địa Hình Thái Học: Địa thế địa bồn thuỷ tra thạch (characteristics, cuesta, flat highland); folded terrain (original forms)--anticline, syncline, and some changed terrains, combe, ruz, cluse; bouclier, massif anciens, their formation, eroded surface--peneplain, faille,[1] horst, graber; volcano--lava, forms of volcanoes; icebergs (their forms); desert (different forms); sea coast. 4. Climate: Atmosphere; climate factors and elements; equatorial, tropical, temperate and arctic zones; study of some special kinds of climate--monsoon, mediterranean, desert. 5. Hydrology: Ocean; river, pond, lake. 6. Animals and Vegetation. B. HUMAN GEOGRAPHY. 1. Population: World population; distribution of population in the world; population variations--birth rate, death rate, increase rate. 2. Ethnology: Race; languages; religion. C. ECONOMIC GEOGRAPHY. 1. Economic Activities: Early economic activities; industrial activities; transportation and business activities.

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[1] Ibid., page 193.

CIVIC EDUCATION (2 hrs a wk)

A. THE NATION. 1. Elements of a Nation: The people; the land; the government. 2. An Independent Country (Emphasize self-determination): International relations; basis to organize and administer public power--the constitution and national laws. 3. Organization of Public Powers (use the examples of the Republic of Viêt-Nam): Legislative; executive; judiciary. B. THE SOCIETY. 1. Social Relations: Courtesy (how to speak, greet, introduce oneself, etc.); weddings and funerals. 2. Teen-age Law Breakers: Causes; law-breaking forms; effects and solutions.

FIRST FOREIGN LANGUAGES (6 hrs a wk)

A. ENGLISH. 1. Grammar: Study in detail the 8th and 9th grade programs of study. 2. Literature: Political, cultural, economic, and social life of Great Britain by text study; outside reading of any simplified edition written by the authors studied in the literature program. 3. Assignments: Dictation--summarize the text studied; answer questions related to the units; do the tests related to the texts studied or to literature; write essays on simple topics; translate into English or vice versa. 4. Textbook: English for Today, Book III: the last 10 lessons, and Book IV: lessons 9, 13, 14, 15, 16. B. FRENCH. 1. French Culture: Cours de Langue de Civilisation Française by Mauger, Book II, Lessons 21-50; textbook. 2. French Literature: La Fontaine; Moliere; Alphonse Daudet; Anatole France. 3. Grammar: Learn grammar while studying [1]

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[1] Ibid., page 194.

the texts in Cours de Langue de Civilisation Francaise by Mauger, Book II, Lessons 21-50. 4. Assignments: Translate text study into English and vice versa; write easy essays on common topics.

SECOND FOREIGN LANGUAGES (6 hrs a wk)

A. ENGLISH. Textbook: English for Today, Book I, McGraw-Hill Book Co., N.Y. 1962. B, FRENCH. Vocabulary; conversation; reading; recitation; grammar; dictation; written assignments from Cours de Langue de Civilisation Francaise by Mauger, Book I.

CLASSICAL LANGUAGES (6 hrs a wk) [For Classical Literature Major only]

A. SINO-VIETNAMESE. 1. Text Study: Modern Vietnamese language; ancient Chinese and Vietnamese poems (emphasize Chinese and Vietnamese texts which have been handed down to the present time or have been translated into Vietnamese); texts--classical language and Chinese poem collections, Hoãng Việt's prose collection, Hoãng Viết's poem collection, excerpts from Vietnamese history and geography; tell stories related to the texts. 2. Literature: General study of the authors of the texts studied. 3. Vocabulary: Expressions, idioms, classical allusion. 4. Grammar and Calligraphy. 5. Assignments: Translate Tam Quốc Chí from Sino-Vietnamese to Vietnamese; write essays from memory.
B. LATIN (Read Latin according to Roman pronunciation): 1. Morphology: Transformation of nouns, adjectives and pronouns; verb conjugation; words which have not been transformed; structure of a simple sentence; order of words in a sentence. 2. Grammar: Explanation of a number of main prefixes and suffixes. 3. Exercises: Read and translate short and easy paragraphs. 4. Authors: Epitone Historiae; Graecae; Phedre; 20 selected fables.

PHYSICS (½ hr a wk)

A. FORCE. 1. Study: Measurement of force by the extension of a spring; units--force kilogram, Newton; experiment with parallel forces and converging forces; add and revolving forces; force couple. 2. Work and Power: Definitions; units--Joule, Watt. B. HYDROSTATICS. 1. Definition of Pressure:[1]

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[1] Ibid., page 195.

Unit: N/m^2; pressure at a point in liquid; difference of pressure between two points in liquid; pressure at a point on the wall or at the bottom of a liquid container. 2. Archimedes' Principle. C. TEMPERATURE. Mercury thermometer; isothermal opression of gas, law of Mariotte; definition of the specific weight of a gas; heat--units: calorie, Joule; definition of heat of solids and liquids.

CHEMISTRY (½ hr a wk)

A. REVIEW. 1. Basics: Water; hydrogen; oxygen; air; mixtures and compounds; lime; ammoniac; sulfur; sulfurons anhydride; sulfuric acid; nitric acid; carbon; carbonic anhydride; carbon oxide; basic concepts of acids, bases, and Salts. B. ATOMIC THEORY. 1. Introduction : Nomenclature; formulas.

MATHEMATICS (1 hr a wk)

A. PLANE GEOMETRY. 1. The Ratio of Two Straight Line Segments: Points dividing a straight line segment according to predetermined ratio; algebraic ratio of two parallel vectors; Thales' theorem; similar triangles; formulas in a right triangle; relations between the sections determined by a circle cutting two concurrent straight lines. 2. Sine, Cosine, and Tangent of an Acute Angle: Trigonometric formulas in a right triangle; length of the projection of a line segment; how to use the sine, cosine, and tangent tables. 3. Review of equilateral polygons and the length of an arc (accepting the formula $L = 2\pi R$); radian. 4. Review of the area of a circular sector (accepting the area of the circle to be πR^2). B. CALCULUS. 1. Vector, Algebraic Values, Chasles Formula: Determining a point on a plane by two orthogonal coordinates. 2. Function of a Variable: Function defined in a range; study of the function $y = ax$; $y = ax+b$; $y = \frac{1}{x}$; $y = \frac{a}{x}$. 3. Equation and Inequality Having One Unknown: System of two linear equations with two unknowns.

NATURAL SCIENCES (1 hr a wk)

A. INTRODUCTION. 1. Definition of Special Fields: Aim; application; the Earth in the universe; structure of the Earth; Earth temperature. B. MINERALOGY.[1]

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[1] Ibid., page 196.

1. Introduction to Minerals: Main kinds--quartz, feldspar, mica. 2. Rock Study: Generalities of rocks; vocanic rocks--structure, classification, main kinds--granite and basalt; sedimentary rocks--main kinds; metamorphic rocks--gneiss, mica, schist. C. PALEONTOLOGY. Definition of fossoil; main findings of Paleontology.

PHYSICAL EDUCATION (3 hrs a wk): Same, more advanced, activities as in former grades.[1]

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[1] Ibid., page 197.

Second Cycle

11th Grade: Experimental Science Major (Section A) and Mathematics Major (Section B)

Subjects	EXPERIMENTAL SCIENCE (A) Number of Hours Per Week	MATHEMATICS (B) Number of Hours Per Week
Vietnamese	3	3
History	2	2
Geography	1	1
Civic Education	2	2
Philosophy	0	0
First Foreign Languages	4	4
Second Foreign Languages	4	4
Classical Languages	0	0
Physics	3	3
Chemistry	1-½	1-½
Mathematics	4	6
Natural Sciences	3	1
Physical Education	3	3
Total	30-½ hours	30-½ hours

VIETNAMESE (3 hrs a wk)

A. TEXT STUDY AND LITERATURE. 1. Literature: Same as Modern Literature Major but in less detail. 2. Poetry Form: Modern poetry. 3. Study of excerpts written by Nguyễn Công Trứ, Nguyễn Khuyến, Trấn Tế Xướng, Đống Dướng Tạp Chí Group, Nam Phong Group (Phạm Quỳnh), Nguyễn Khắc Hiếu (prose) Tự Lực Vẫn Đoãn: Nhất Linh (Đoạn Tuyệt), Khái Hưng (Nửa Chững Xuấn), Hoàng Đạo (Mười Điếu Tâm Niệm). B. EXERCISES. 1. Oral Presentation: Same as Modern Literature Major. 2. Essay: Same as Modern Literature Major.

HISTORY (2 hrs a wk): Same as Modern Literature Major.[1]

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[1] Ibid., page 198.

GEOGRAPHY (1 hr a wk): Same as Modern Literature Major.

CIVIC EDUCATION (2 hrs a wk): Same as Modern Literature Major.

FIRST FOREIGN LANGUAGES (4 hrs a wk)

A. ENGLISH. Same as Modern Literature Major but in less detail and including excerpts dealing with science. No literature. B. FRENCH. Same as Modern Literature Major except 19th Century literature, and essays.

SECOND FOREIGN LANGUAGES (4 hrs a wk)

A. ENGLISH. Textbook: English for Today, Book II. B. FRENCH. 1. Vocabulary, conversation, reading, recitation, dictation, grammar from Cours de Langue de Civilisation Française by Mauger, Book I, Lessons 36-65. 2. Written Assignments: Answer questions in readings and dictations; answer questions focused on the same topic; make sentences according to the teacher's examples.

PHYSICS (3 hrs a wk)

A. OPTICS. 1. Linear Propagation of Light: Virtual and real images; eclipses, solar and lunar. 2. Reflection of Light: Plane mirror; statement of Descartes-Snell law; rotating mirror; field vision. 3. Refraction of Light: Statement of Descartes-Snell law; refraction index--absolute and relative refraction indices; method of drawing a refracted ray; partial refraction, total reflection; application--totally reflecting prism; reflection and refraction at plane surface--images and formulas; plane parallel plate--ray treatment, images, and formula. 4. Prisms: Ray treatment, formulas, condition for the existence of an emergent ray; experimental discussion of deviation; angle of deviation; minimum angle of deviation; thin lens--definition and classification (converging and diverging lens); condition for clear images; converging lens--ray treatment, images, Descartes formula; measurement of focal length by the Silbermann method; diverging lens--ray treatment, image, Descartes formula. 5. Degree of Convergence: Definition, formulas to measure the degree[1]

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[1] Ibid., page 199.

of convergence from refraction index and lens radii (without proof); compound lens; theorem on the degree of convergence; application to the measurement of the focal length of a diverging lens. 6. The Simplified Eye: Accommodation process; normal eye; near-sightedness; far-sightedness; old eye; medical spectacles; resolving power. 7. Magnifier: Range of viewing; magnification; commercial magnification; microscope--range of viewing; magnification; commercial magnification; telescope--principles, magnification (excluding the method of measurement); diffraction of light by a prism; definition of light spectra. B ELECTRICITY. 1. Atomic Structure: Electrons; nuclei (excluding the nuclear structure); ions; electric current in conducting metal and in conducting solvent. 2. Electric Generator: Electromagnetic force; motors; potential difference; power; Ohm law, Pouillet law; power efficiency. 3. Parallel Circuit: Theorems; equivalent resistance; resistance box; measurement of resistance by the Wheatstone Bridge; measurement of the electromagnetic force by voltmeter; connection of electric generators. 4. Magnetism: Natural magnet and man-made magnet; poles; magnetic energy density; Coulomb law; magnetic field--induced field; equation F = mB; lines of field; uniform magnetic field; the effect of a uniform magnetic filed on a magnet; magnetic movement; magnetic flux through a surface area; magnetic field of the Earth. 5. Electromagnetism: Magnetic field of a current; Oerstedt experiment; magnetic field of an infinite straight wire, a loop, and a solenoid; experiment about the effect of a uniform magnetic field on a definite straight wire; statement of Laplace law; application; the Barlow wheel; induced interaction between two parallel straight wires; definition of Ampere; work of an electromagnetic force; Maxwell law; the principle of maximum magnetic flux; magnetization; qualitative experiment about the magnetization of crude iron and steel; Galvanometer; iron-core rotating ammeter and voltmeter.

CHEMISTRY (1-½ hrs a wk)

1. Review of: Acids, bases, and salts (in light of the ionization theory); Berthollet law; oxidizers and deoxidizers (oxidization numbers); physical and mechanical properties of metals and metallic alloys; common processes in metallurgy. 2. Zinc: Zinc oxide and sulfates. 3. Aluminium: Aluminates; aluminum sulfate; alum; iron; cast iron; steel; iron oxides; iron sulfates;[1]

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[1] Ibid., page 200.

properties of iron salts of types II and III. 4. Copper: Copperous alloys; copperous oxides and sulfates. 5. Lead: Alloys; lead oxides.

MATHEMATICS (4 hrs a wk) [For Experimental Science Major (A)]

A. SPACE GEOMETRY. 1. Lines and Planes: Parallelism of lines and planes; perpendicularity of a plane and a line; line segments, perpendicular and oblique; angle of two intersecting planes; definitions of angles of trihedral and polyhedral cones. 2. Linear Projection onto a Plane (of a point, a line and a line segment): Angle of a line and a plane; definitions of reflections in a point, a line, and a plane; definitions of center, axis, and plane of inflections. 3. Definitions: Parallelepipeds, polyhedral cylinders and cones; volume of a right parallelepiped; volumes of polyhedral cylinders and cones (without proofs); extended areas of orthogonal polyhedral cylinders and cones; circularly symmetric cylinders and cones; peripherical areas of these cylinders and cones (without proofs); volumes of these cylinders and cones (without proof). 4. Spheres: Intersection of a sphere and a line; tangent line to a sphere; plane cross-section; contact planes; determination of a sphere; definitions of cones and cylinder circumscribing a sphere; volume and surface area of a sphere (no proofs). B. ANALYSIS. 1. General Equation of Second Degree with One Unknown: Existence and determination of solutions; sum and product of the roots; sign of roots; given the sum and product of the two roots, find the roots; second degree polynomial; factorization into products; variation of second degree polynomial; inequalities of second degree. 2. Definition and Geometrical Meaning of Differentiation: Rules to evaluate derivatives (derivative of a sum, derivative of a product); the relationship between the variation of a function and the sign of its derivative; functions of second order; monotonous functions; functions of the form $\frac{ax^2+bx+c}{a'x^2+b'x+c'}$. 3. Linear Motion: Equation of motion; uniform linear motion; the Algebraic value of velocity; uniformly accelerating linear motion; equation of motion; the instant Algebraic value of velocity. C. TRIGONOMETRY. The same as the curriculum for section B, excluding the part on logarithmic functions.

MATHEMATICS (6 hrs a wk) [For Mathematics Major (B)]

A. SPACE GEOMETRY. 1. Lines and Planes and Their Determination: Cross-ratio; parallelism of line and plane; perpendicularity of line and plane; line segments,[1]

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[1] Ibid., page 201.

perpendicular and oblique; angle of two intersecting planes; definition of angle of trihedral cones and polyhedral cones. 2. Linear Projection (of a point, a line and two parallel lines): Projection of a right angle; angle of a line and a plane; projection of a line segment onto a plane; principal inclined line of a plane; common perpendicular segment of two lines; projected area of a plane polygon. 3. Definitions: Reflection in a line, a point, and a plane; axis, center and surface of reflection; equivalent vectors; isometries; ratio of two parallel vectors; similarities, similarity of a plane, a line, and a circle. 4. Polyhedral Cylinder and Polyhedral Cone: Cross-section parrallel to bottom surface; volume of a box; volume of a polyhedral cylinder; volume of a polyhedral cone; extended surfaces of a cylinder and a cone; contact surfaces; volume of a cylinder and a cone. 5. Sphere: Intersection of a sphere and a line; plane cross-section; tangent line; contact planes; determination of a sphere; cylindrical and conical surfaces circumscribing a sphere; volume of a spherical sector, a spherical shell, a polar partial sphere. B. ANALYSIS. 1.. Arithmetic Series: Progressive series; logarithm; compound interest; annuity; limit; continuity (proofs of the theorems on limit are not obligatory); indifinite forms. 2. Definition and Geometrical Meaning of Differentiation: Rules to evaluate derivatives (derivative of a sum, derivative of a product); the relationship between the variation of a function and the sign of its derivative; functions of second degree; monotonous function; functions of third degree; functions of the form $\frac{ax^2 + bx + c}{a'x^2+b'x+c'}$. 3. Linear Motion: Equation of motion; uniform linear motion; the Algebraic value of velocity; uniformly accelerating linear motion; equation of motion; the instant Algebraic value of velocity. C. TRIGONOMETRY. 1. Trigonometric Arcs and Angles: Trigonometric functions (sine, cosine, tangent, cotangent); periodicity; relationships among trigonometric functions of the same angle; functions of negative angles; functions of angles in all quadrants in terms of those in the first quadrant; exact value for trigonometric functions of some special angles; equations: $\sin x = \sin a$, $\cos x = \cos a$, $\tan x = \tan a$. 2. Addition of Vectors: Projection of the addition vector on a definite axis; addition formulas for trigonometric functions; half-angle formulas for trigonometric functions; sum, difference, and product of trigonometric functions. 3. Use of the Trigonometric and Logarithmic Tables: Equalities and inequalities in trigonometry (focus on the solution and discussion of the equation: $a \cos x + b \cos x = c$); the functions $\sin x$, $\cos x$, $\tan x$ and $\cot x$; derivatives and graphs of these[1] functions; derivatives of the functions sin (ax+b) and cos (ax+b); the period of a periodic function; variation of several simple trigonometric functions.

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[1] Ibid., page 202.

NATURAL SCIENCES (3 hrs a wk: 2 hrs lecture; 1 hr lab) [For Experimental Science Major (A)]

A. CLASS WORK (2 hrs a wk). 1. Generalities of Botany: General structure of a flowering plant--description of a plant having roots, stem, leaves, flowers, fruits, and seeds; chemical composition and the physical properties of protoplasm; plant cell--structure, physiology; cell nucleus--DNA and RNA and synthesis of proteins; cell division; plant tissues; roots, stem, and leaves--parts of roots, stem, and leaves, primary structure, secondary structure, growth (roots and stem). 2. Plant Nutrition: Autotrophs--growth hormone and phototropic growth, absorption of water and inorganic salts, metabolism of nitrogen compounds (not including its cycle), circulation of xylem sap (active transport), assimilation of carbon dioxide (photosynthesis). [Experiments proving the assimilation of chlorophyll; chlorophyll intake, function; outcome of chlorophyll intake; the contemporary theory of the chlorophyll assimilation.] 3. Synthesis of Protein and Lipid: The circulation of phloem sap; plant respiration. [Experiments proving respiration (of a plant and a tissue); intensity of respiration; quotient of respiration; outcome of respiration.] 4. Anaerobic Life--Fermentation: Plants' food--synthetic method, survey on plants' food; principles; knop and sachs media; summary on plants' food. 5. Application in Agriculture: Heterotrophs--definition; predatic plants; parasitic plants; symbiotic plants; summary of plant nutrition; changes made by nitrogen and carbon in nature--nitrogen cycle, carbon cycle. 6. Vegetation and Its Media: General study on ecology; relationship between soil and plants--characteristics of soil, influence of vegetation on plants and vice versa; influence of climate on vegetation; interaction between different kinds of plants--competition (self-protection against climate), interdependence and mutualism; generalities of the plant kingdom--distribution of biomes; evolution of certain biotic communitics. 7. Reproduction: Asexual reproduction; sexual reproduction of angiosperms--morphology of a flower with all parts; anatomy of--stamen, pistil; fertilization--pollination, germination of pollen grains, union of gametes; fruits--development of a fruit, biology of fruits, kinds of fruits; seeds--seed formation, kinds of seeds, germination. 8. Pasteur's Contribution: Bacteria (general study only);[1]

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[1] Ibid., page 203.

fermentation. B. LAB WORK (1 hr a wk). Each student has a notebook to take notes and make drawings. Lesseon 1: A flowering plant with roots, stem, leaves, flowers; fruits and seeds; each student brings one of such plants to class; after class, they draw all parts of the plant in the notebook. Lesson 2: Dehydration reaction of Fehling solution on glucose; color reactions of proteins. Lesson 3: Cell; tissue (if miscroscope is available, the students observe the onion skin cell, leaves, and different tissues). Lesson 4: Roots stem, and leaves; in regards to forms--the students make a collection of different kinds of roots, trunks, and leaves, how to press and dry them; on structure--if microscope is available, the students observe the cross-sectioned samples. Lesson 5: Experiments to show that the root is the organ that absorbs water and inorganic salts. Lesson 6: Experiments to show the assimilation of chlorophyll of green plants. Lesson 7: How to extract chlorophyll--chromatography. Lesson 8: Observation of flowers, fruits and seeds; draw them in the notebook.

NATURAL SCIENCES (1 hr a wk) [For Mathematics Major (B)]

A. GENERALITIES OF BOTANY. Part 1: Description of a flowering plant having roots, stem, leaves, flowers, fruits and seeds; plant cell; plant tissues; roots, stem, leaves (cotyledons), monocots, and dicots; parts of a root, a stem, a leaf; primary structure; secondary structure--root and trunk of a dicotyledon. Part 2: Plant nutrition; metabolism of nitrogen compounds; circulation of upward sap (active transport); the assimilation of chlorophyll; plant respiration; fermentation; circulation of outward sap (diffusion). Part 3: Sexual reproduction of an angiosperm; description of a flower (with all reproduction organs), structure of stamens and pistils, fertilization.

PHYSICAL EDUCATION (3 hrs a wk)

Review all activities in the former grades; organize competitive matches between classes; first-aid training.[1]

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[1] Ibid., page 204.

Second Cycle

11th Grade: Modern Literature Major (Section C) and Classical Literature Major (Section D)

Subjects	MODERN LITERATURE (C) Number of Hours Per Week	CLASSICAL LITERATURE (D) Number of Hours Per Week
Vietnamese	5	5
History	2	2
Geography	1	1
Civic Education	2	2
Philosophy	0	0
First Foreign Languages	6	6
Second Foreign Languges	6	0
Classical Languages	0	6
Physics	½	½
Chemistry	½	½
Mathematics	1	1
Natural Sciences	1	1
Physical Education	3	3
Total	28 hours	28 hours

VIETNAMESE (5 hrs a wk)

A. LITERATURE. 1. Forms of Literature: From Nguyễn Du to 1945; review Hát Nói, Đưởng Luật form of Poetry; modern Poetry. 2. Study Excerpts of: Nguyễn Công Trứ; Cao Bá Quát; Nguyễn Đình Chiểu; Chu Mạnh Trinh; Nguyễn Khuyến; Trần Tế Xương; Staff of Đồng Dướng Tạp Chí (Phan Kẻ Bính); Nam Phong Magazine Staff (Phạm Quỳnh, Nguyễn Trọng Thuật); Nguyễn Khắc Hiếu (prose); Tự Lực Văn Đoàn groups: Nhất Linh (his work: Đoan Tuyệt), Khái Hửng (Nửa Chửng Xuân), Hoàng Đạo (Mười Điều Tâm Niệm). B. EXERCISES. 1. Student's oral presentation of the works written by the authors mentioned in the literature program to help the students learn how to express themselves naturally and clearly. 2. Essays:[1]

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[1] Ibid., page 205.

Analyse and discuss literature topics; how to write an outline and to organize different parts of the essay.

HISTORY (2 hrs a wk)

A. VIETNAMESE HISTORY (from 1802 to 1884). 1. The Nguyễn Dynasty: General history from King Gia Long to King Tự Đức; administration--government organization, law, defense organization, economics and finance, cultural and social situations, religious persecution; foreign relations--with China and other neighboring countries, with Western countries; the Vietnamese society in the 14th century--social structure, ways of living, modernization campaign. 2. The French Invasion: The French attack of Đà Nẵng; the loss of the three Eastern provinces of South Việt-Nam; treaty of 1862; the loss of the three Western provinces of South Việt-Nam; the first French attack of North Viet-Nam; the French attack of Thuận Hóa; the treaties of 1883-1884; the French-Chinese conflict in North Việt-Nam. B. WORLD HISTORY (from the end of the 18th Century to 1914). 1. The U.S.A.: From the campaign for independence to 1914. 2. England: The progress of the parliamentary regime. 3. The Industrial Revolution. 4. The European revolution in the second half of the 18th century. 5. The colony expansion of the Western countries (Europe). 6. China and the colonialists' invasion: Tân Hội Revolution. 7. Japan: Minh Trị Era. 8. The Far-East countries facing the colonialists' invasion: (Burma, Thailand, Laos, Cambodia, Malaysia, Philippines, Indonesia).

GEOGRAPHY (1 hr a wk)

A. PHYSICAL GEOGRAPHY. 1. General view of Việt-Nam: Location, shape, and area of Việt-Nam; its boundaries (natural and legal). 2. Physical Aspects: The terrain--mountain and highland, delta, coast and sea bottom; climate--the climatic areas; hydrology and oceanography--river, pond and lake, ocean water and its movement, animals and vegetation under sea; distribution of animals and vegetation. B. HUMAN GEOGRAPHY. 1. Population of Việt-Nam: Ethnography--ethnic groups, languages, religions, customs; changes in population enumeration; migration; population distribution--in the country, in the city; forms of habitation (in the country, in the city). 2. Political Geography:[1]

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[1] Ibid., page 206.

Political regime in Việt-Nam; central and local administration. 3. Economic Geography: Agricultural activities (farming, husbandry, fishery); arts and crafts, industry; communication, trade.

CIVIC EDUCATION (2 hrs a wk)

A. BASIC ECONOMICS. 1. Basic Concept: Definition; objective; usefulness. 2. Economic Policy: Free economic policy--its start, support argument and policy, how to carry it out, its consequences; the study of rigid and flexible economic policies--arguments for and against each policy, how to carry them out; their conquences. 3. Factors of Production: Natural resources, capital, labor, technique; outline of production factors in Việt-Nam; production and trade agencies--private enterprise--definition, classification, merging of companies; condition of private enterprises in Viet-Nam; public corporations--definition, classification; condition of public corporations in Việt-Nam; cooperatives--condition of cooperatives in Việt-Nam. 4. Money: Generalities on monetary system in Việt-Nam--definition, brief history of evolution; gold and silver coins; paper money (issue procedure, inflation, depreciation). 5. Credits and Banks: Credits--definition, kinds, role; summary on credits in Việt-Nam; banks--definition of main transaction, central banks, commercial banks.

FIRST FOREIGN LANGUAGES (6 hrs a wk)

A. ENGLISH. 1. Text Study and Literature: Text--Great Britain's political, social, cultural and economic aspects; Literature--summary of Great Britain's literature of the 19th and 20th centeries [the student makes a report in Vietnamese; summary and questions will be made in English]; outside reading--encourage students to read a simplified version of an author in the literature program. 2. Grammar: Review and gain futher grammatical knowledge acquired in previous years. 3. Assignments: Same as in 10th Grade for Literature Major. B. FRENCH. 1. French Culture (2 hrs a wk). 2. French Literature: 19th century, including Chateaubriand; Lamartine; Victor Hugo; George Sand. 3. Grammar: Follow the order in Cours de Langue de Civilization Française, Lessons 51-70. 4. Written Assignments: Text study; translation; essays on common topic (description, narration, letter writing).[1]

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[1] Ibid., page 207.

SECOND FOREIGN LANGUAGES (6 hrs a wk) [For Modern Literature Major (C) only]

A. ENGLISH. English for Today, Book II. B. FRENCH. 1. Vocabulary, Conversation, Reading, Dictation, Grammar, Recitation from Cours de Langue de Civilization Francaise by Mauger, Book I, Lessons 36-65. 2. Written Assignments: Answer questions in the readings and dictations; answer questions related to the same topic; make sentences according to the teacher's examples.

CLASSICAL LANGUAGES (6 hrs a wk) [For Classical Literature Major (D) only]

A. SINO-VIETNAMESE. 1. Text Study (2 hrs a wk): Modern Vietnamese; classical prose and poetry of China and Viêt-Nam, which have been translated into Vietnamese. 2. Literature (1 hr a wk): Make a brief study of the authors when the students study their texts. 3. Vocabulary (1 hr a wk): Idioms; expressions; references in the texts to be studied. 4. Grammar (1 hr a wk): Syntax; prosody; discuss poetry forms briefly. 5. Assignments (1 hr a wk): Translate from Sino-Vietnamese to Vietnamese (Dong Chu Liet Quoc); learn to use the dictionary. B. LATIN. 1. Complete study of morphology; structure of a compound sentence. 2. Vocabulary: Mutation and structure of words. 3. Exercises: Text study, translation of authors--Corneluis Nepos: Miltiades, Hannibal, Epaminondas; Caesar: De Bello Gallico.

PHYSICS (½ hr a wk)

A. OPTICS. 1. Linear Propagation of Light: Light reflection; plane mirrors; statement of Descartes-Snell law; light refraction; statement of Descartes-Snell laws; definition of relative and absolute indices of refraction; diffraction of light by prism. 2. Thin Lens: Definition and classification (converging lens and diverging lens); converging lens--ray treatment, focal point, focal length, imaging (omitting formulas); the principles of a magnifier. B. ELECTRICITY. 1. Atomic Structure: Electrons, nuclei (omitting the nuclear structure); ions; electric current. 2. Generators: Electromagnetic force; motors; potential difference. C. MAGNETISM. 1. Natural Magnets and Man-made Magnets: Poles; qualitative difinition of magnetic field; existence of the Earth's magnetic field; magnetic field of an electric current; Oerstedt experiment.[1]

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[1] Ibid., page 208.

CHEMISTRY (½ hr a wk)

SUMMARY. Introduction to oxidizers and de-oxidizers; review on common processes in metallurgy; common metals--zinc, iron, cast iron, steel, aluminium, copper, lead (physical and mechnical properties of only zinc, iron, aluminium and copper are discussed).

MATHEMATICS (1 hr a wk)

A. SPACE GEOMETRY. 1. Lines and Planes and Their Determination: Cross-ratios; parallelism of a line and a plane; perpendicularity of a line and a plane; line segment, perpendicular and oblique; angle of two intersecting planes; perpendicular planes; definitions of angles of trihedral and polyhedral cones; definitions of reflections (in a point, a line, and a plane); definitions of center, axis, and plane of inflections; definitions of parallelpipeds, polyhedral cylinders and cones, circular cylinders and cones; peripherical areas and volumes (without proofs); definition of spheres; intersection of a sphere and a plane; tangent lines; contact planes; surface area and volume of a sphere (no proof).
B. ANALYSIS. 1. General Equation of Second Degree with One Unknown: Condition for the existence of roots; evaluation of roots; sum and product of roots; sign of roots. 2. Variation of polynomials of second degree with constant coefficients; graphs.

NATURAL SCIENCES (1 hr a wk)

GENERALITIES OF BOTANY. Part 1: Description of a flowering plant having roots, stem, leaves, flowers, fruits and seeds; plant cell; plant tissues; roots, stem, leaves (cotyledons), monocots and dicots--parts of a root, a stem, a leaf; primary structure; secondary structure--root and trunk of a dicotyledon. Part 2: Plant nutrition; metabolism of nitrogen compounds; circulation of upward sap (active transport); the assimilation of chlorophyll; plant respiration; fermentation; circulation of outward sap (diffusion). Part 3: Sexual reproduction of an angiosperm; description of a flower (with all reproduction organs); structure of stamens and pistils; fertilization.[1]

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[1] Ibid., page 209.

PHYSICAL EDUCATION (3 hrs a wk)

Review all activities in the former grades; organize competitive matches between classes; first-aid training.[1]

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[1] Ibid., page 210.

Second Cycle

12th Grade: Experimental Science Major (Section A) and Mathematic Major (Section B)

Subjects	EXPERIMENTAL SCIENCE (A) Number of Hours Per Week	MATHEMATICS (B) Number of Hours Per Week
Vietnamese	0	0
History	1-½	1-½
Geography	1-½	1-½
Civic Education	1	1
Philosophy	4	3
First Foreign Languages	3	3
Second Foreign Languages	3	3
Classical Languages	0	0
Physics	5	5
Chemistry	2	2
Mathematics	5	9
Natural Sciences	4	1
Physical Education	3	3
Total	33 hours	33 hours

HISTORY (1-½ hrs a wk): Same as Modern Literature Major.

GEOGRAPHY (1-½ hrs a wk): Same as Modern Literature Major.

CIVIC EDUCATION (1 hr a wk): Same as Modern Literature Major.

PHILOSOPHY [3 hrs a wk for Mathematics Major; 4 hrs a wk for Experimental Science Major]

A. PSYCHOLOGY. Same as Modern Literature Major except--abstraction and generalization; use of symbols; language and ideas; judgment and reasoning; will; feeling;[1]

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[1] Ibid., page 211.

reason; freedom. B. LOGIC. Same as Modern Literature Major *except*--some examples about the contemporary theories in Physics, Chemistry, and Biology. C. ETHICS. Same as Modern Literature Major.

FIRST FOREIGN LANGUAGES (3 hrs a wk)

A. ENGLISH. Same as Modern Literature Major but in less detail; texts concentrate on scientific terms; literature. B. FRENCH. Same as Modern Literature Major.

SECOND FOREIGN LANGUAGES (3 hrs a wk)

A. ENGLISH. *English for Today*, Book III. B. FRENCH. 1. *Vocabulary*, *Conversation*, *Reading*, *Recitation*, *Grammar*, *Dictation* from *Cours de Langue de Civilisation Française*, Book II, Lessons 1-36. 2. *Assignment*: Answer questions based on the reading and dictation; answer consecutive questions related to the same topic; build sentences according to a given pattern; translate short texts.

PHYSICS (5 hrs a wk)

A. KINETICS AND DYNAMICS. 1. *Errors and Probability*: Approximate formula; free fall in vacuum; a hanging bob; Newton's tube; motion photography. 2. *The Fundamental Law of Kinetics* (without proofs): Mass; weights; a system of mass points; external and internal forces; center of mass--position determination of center of mass; theorem on center of mass. 3. *Application to Translational Motion*: Tension; uniform circular motion (spherical pendulum, motion of a car at a curve, sattelite, oscillation of a mass-spring system); three-demensional motion of a particle in vacuum; rotation of a rigid body about an axis; fundamental equation of kinetics for the rotational motion of a rigid body; inertial motion; statement of Huyghens' theorem; sinusoidal motion; rotation of a torsional pendulum. 4. *Kinetic Energy*: Definition and theorems; applications--sliding or rolling without sliding on an inclined surface; relativistic formulas related to kinetic energy. 5. *Potential Energy*: Potential energy of gravitational field; potential energy of elastic forces; mechanical energy--[1]

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[1] Ibid., page 212.

conservation of mechanical energy. 6. Compound Pendulum: Theoretical consideration of small oscillations--formula to find period; simple pendulum--formula to find the period equivalent to that of the compound pendulum (excluding reversible pendulum). 7. Momentum: Convervation theorem; principles of rockets. 8. Air Friction: Final velocity; applications--airplanes; parachutes; definition of the velocity unit Mach; convertibility of heat and work; energy units--calorie, Joule. 9. Heat Engine: Principles of 4-stroke engine; principles of 2-stroke engine; virtual power; real power; real (or industrial) efficiency and heat efficiency; Carnot principle and theorem; maximum heat efficiency; principles of a refrigerator. 10. Forms and Transformations of Energy (mechanical energy, heat, electricity, radiation, chemical energy): Conservation of energy; Einstein equation. B. PERIODIC MOTIONS. 1. Definition of a Periodic Motion: Period, frequency; Fourier theorem; methods of observation. 2. Propagation of a Pulse: Horizontal and vertical motion; velocity of propagation; propagation of a sinusoidal wave; wave length and equation of motion; Fresnel principle of superposition of 2 sinusoidal waves of identical period moving in the same direction; interference--theoretical and experimental discussion on wave magnitude. 3. Reflection of Waves: Standing waves; assumptions on wave motion; velocity (excluding the method of measurement); wave length; ultraviolet and infrared light--definition and properties; Young's experiment on interference of monochromatic light by two slits. C. ELECTRICITY. 1. Electromagnetic Induction: Lorenz law; induced emf; self-induction; induction unit--Henry. 2. Principles of a Plate Capacitor: Capacitance--definition,unit--(Farad); formula to determine capacitance of a plate capacitor; stored energy (without proof); capacitors in series and in parallel; plate capacitor box of variable capacitance; electric field between the two plates. 3. Definition of an Alternate Current: Generation of an alternate current; properties (experimental approach); efficient current; efficient potential; effects of induction and capacitance in circuits; evaluation of total reactance of a circuit (using Fresnel diagram) excluding the cases where there are emf and motors or where a parallel circuit is involved; average power; power coefficient. 4. Principles of a Transformer: Formulas (without proof); application to energy transportation; properties of electromagnetic waves. D. NUCLEAR PHYSICS. 1. Electronic Radiation: Thermal radiation (diodes, triodes); photoelecttic effect; photons; electron beam; cathode rays; ionization; cathode ray oscilloscope; x-rays; natural radiation; electromagnetic waves in summary; particle and wave nature.[1]

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[1] Ibid., page 213.

CHEMISTRY (2 hrs a wk)

A. GENERAL CHEMISTRY. Compounds and mixtures; elements; the atomic theory (excluding the fundamental laws of Proust, Dalton, Richter, Gay-Lussac); symbol and atomic weight of an element; formula and molecular weight of a compound; nomenclature of compounds; atomic number; gram-atomic weight; gram-molecular weight; Avogadro number; physical law on molecular weight--Avogadro-ampere law; Raoul law; the concept of valency. B. ORGANIC CHEMISTRY. 1. Introduction: Definition of an organic compound; qualitative analysis; quantitative analysis; molecular formulas of organic compounds; synthesization of organic compounds; chemistry radicals; functional groups. 2. Methane: Saturated hydrocarbons; alkare radical; functional group; petroleum. 3. Ethylene: Usaturated acethyl hydrocarbons; alkene radical; functional group. 4. Ethyl Alcohols: Alcoholic fermentization; alcoholic radical; classification of primary, secondary, and tertiary alcohols; ethyl aldehyde; aldehyde radical. 5. Acetone: Acethol radical; acetic acid; acetic fermentization; radical of organic acids. 6. Esterization: Hydrolysis; saponization; fats; fatic acids; soaps; wax; glycerines; benzene; phenols; anilines.

MATHEMATICS (5 hrs a wk) [For Experimental Science Major (A)]

A. ANALYSIS. 1. Decimal Logarithm: Definition $y = \log X \Leftrightarrow x = 10^y$; logarithm of a product, a quotient, a power function and functions of fractional powers; use of logarithmic table; logarithms and antilogarithms; laws of logarithms; application to numerical evaluation and to solution of equation reducible to a second order; equation. 2. Trigonometric Functions (arguments expressed in terms of radians): Limit of $\frac{\sin x}{x}$ as $x \to 0$; derivatives of sin x, cos x, sin (ax+b) and cos (ax+b); determination of period and graph of the functions $y = \sin(ax+b)$; $y = \cos(ax+b)$. 3. Integration: Definition: Integral of a sum; integral of a function of known integral multiplied by a constant; integrals of x" , u'u" (n is a rational number other than -1); sin (ax+b) and cos (ax+b), excluding the methods of integration by parts and by change of variables; evaluation of the area under a curve and between two curves (without proofs). 4. Vectors: Definition; free and bound vectors; zero vectors; translational vectors; axes; unit vectors; ratio of two parallel[1]

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[1] Ibid., page 214.

vectors; Algebraic value of a vector projected on an axis; Chasles formula; addition of vectors; projection of vectors on an axis; definitions and properties. 5. Plane Coordinates: Orthogonal coordinates; coordinates of a point; components and norm of a vector; equation for a circle. 6. Vector Functions of One Variable (defined by its two components with respect to an orthogonal coordinate system): Vector differentiation; definition, components of the derivative vector; direction and Algebraic value of the derivative vector; formulas of vector differentiation. B. KINETICS. 1. Introduction to Motion: Description of motion by orbital equation and time; dependent equation; diagram of the orbit of motion projected on the abscissa; description of motion by a vector function; parametric equations of motion; Descartes equation of orbit. 2. Velocity Vector: Velocity vector defined as the first derivative vector; given time-dependent equations and orbital equation, determine velocity vector. 3. Acceleration Vector: Acceleration vector defined as the derivative vector; motion of uniform acceleration and deceleration. [Do not discuss normal or tangent components of acceleration vector.] 4. Linear Motion: Direction of motion; motion of uniform acceleration and deceleration; diagram of motion in the abscissa; uniform linear motion. 5. Uniform Circular Motion: Time-dependent equation and orbital equation--velocity and angular velocity; parametric equations; velocity vector and acceleration vector. 6. Sinusoidal Linear Motion: Sinusoidal linear motion with time-dependent equation of the form: $x = a \cos (wt+\phi)$; reduction of equation $x = a \cos (wt+\phi)+b \cos (wt+\theta)$. [Do not discuss Fresnel's graphical method.] C. SETS - PROBABILITY - STATISTICS. 1. Sets: Basic concepts; null set; subset; complementary; intersection; union; difference; product set; meaning of the symbols $\Rightarrow$, $\Leftrightarrow$, $\forall$, $\exists$; groups; permutations; Newton's equality; Pascal's inequality. 2. Probability: Events; sample; universe; the concept of equal chance; definition of probability in terms of percentage; addition formula; multiplication formula; independence between two events. 4. Descriptive Statistics: Arrangement of facts--tables, diagrams (bar diagram, line diagram, pie diagram); frequency distribution--single frequency, class frequency; graphs; histogram; frequency curve; frequency polygon; accumulative frequency; cumulative curve; mean, median, mode; deviations--mean deviation, quartile deviation, standard deviation; linearity--dispersion curves; curve fitting and the method of least squares.[1]

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[1] Ibid., page 215.

MATHEMATICS (9 hrs a wk) [For Mathematics Major (B)]

A. ALGEBRA. 1. Basic Concepts of Mathematical Logic: Definition of a statement; negation; meaning of the symbols $\wedge$, $\vee$, $\Rightarrow$, $\Leftrightarrow$, $\forall$, $\exists$; inverse statement; methods of verification--induction, deduction. 2. Sets: Basic concepts of sets; null set; subset; set of subsets; complement; intersection; union; difference; product set; ordered pair; ordered element of n dimension (use N, Z, Q, R as examples). 3. Relation: Definition; properties--reflection, symmetry, antisymmetry, translation; equivalent relations--equivalent class, division of a set into equivalent classes; ordered relation. 4. Mapping: Definition, diagram; onto mapping; one-to-one mapping; one-to-one-and-onto mapping; inverse mapping; product of mappings. 5. Internal Laws: Definition; properties; associativity, commutativity; identity element; inverse element; reducible element; distribution of two laws. 6. Basic Structures Group: Definition; properties; subgroup; ring; field--definition, examples; vector space--definition of external laws, definition, examples of vector space. 7. Complex Number: Definition in terms of ordered pairs (x, y); equal; opposite and conjugate complex numbers; addition, subtraction, multiplication, division of complex numbers; complex field; the symbol i; complex number expressed in the form $z = x+iy$; modulus and argument; trigonometric form; De Moivre's formula. B. ANALYSIS. 1. Real Function of a Variable: A real function defined as a mapping in R; inverse function; limit and continuity; graph, graph of an inverse function; asymtotes--definition, how to find it. 2. Derivative: Derivative of a function and its inverse; differentials--definition, geometric description. 3. Integral: Definition; symbol of an indefinite integral; integral of a sum; integral of a product of a constant and a function of known integral (the function is of the form x^n, $u'u^n$ where n is a rational number other than -1); integral of sin (ax+b) and cos (ax+b). [Do not discuss the methods of change of variables and integration by parts]; geometrical meaning of integral; symbol of a definite integral; formulas to evaluate the area under a curve or between two curves. 4. Neperian Logarithmic Function Log x: Definition; logarithm of a product, a quotient, a power; limit of Log x as $x \to 0$ and $x \to \infty$; the base e; graphs; derivative of Log u, integral of $u'u^{-1}$. 5. Exponential Function e^x: Exponential function defined as the inverse function of Log x; derivative; graph. 6. Differential Equation: Acceptance of formula to solve the equations $y' = f(x)$; $y'' = f(x)$; $y' = ay$; $y''+w^2y = 0$ with f(x) being a simple function [1]

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[1] Ibid., page 216.

such as a polynomial with integral coefficients, sin (ax+b); cos (ax+b) and a and w being constants. 7. *Vectorial Function of a Variable* (defined by its two components in a two-dimensional system of coordinates): Vectorial derivative--definition, components of a vectorial derivative, direction and Algebraic value, of a vectorial derivative; formula to find derivatives. C. KINETICS. 1. *Introduction to Motion*: Orbit; description of motion by orbit; time-dependent equations and diagram of motion on the abscissa; description of motion by a vector function or parametric equations. 2. *Velocity Vector*: Instantaneous velocity vector defined as the first derivative vector; determination of velocity vector given orbit and time-dependent equation. 3. *Acceleration Vector*: Instantaneous acceleration vector defined as the second derivative vector; tangential and normal components of accelerator vector; accelerating and decelarating motion. 4. *Simple Motions*: Linear motion; circular motion; linear sinusoidal motion; reduction of equation of the form $x = a \cos (wt+\phi) + b \cos (wt+\theta)$. D. GEOMETRY/ANALYTICAL GEOMETRY. 1. *Vectors*: Definition; equal vectors; equivalent vectors; free vectors; addition of vectors; structural properties of an additional group; vectors--structural properties of a vector space; product of the projected component of a vector by a real number. 2. *Directional Angles in a Plane*: Angles formed by two axes, or two vectors, or two half lines; Chasles formula; angle formed by two lines; middle line; inscribing angles; locus of points substanding a fixed segment under a given directional angle; inscribing tetrahedron; simson line; angle of two curves; properties of an angle of two circles. 3. *Cartesian Coordinates*: System of coordinates; coordinates of a point; components and norm of a vector; scalar product of two vectors; definition, properties; change of coordinates under a translation and a rotation. 4. *Straight Line* (in orthogonal coordinates): Equation $ax+bx+c = 0$; $x \cos\theta + y \sin\theta + p = 0$; directional cosines; directional parameters; angle formed by two straight lines; distance of a point from a line; equation of a line; a middle line of the angle formed by two lines. 5. *Circles*: Geometrical consideration; power of a point with respect to a circle; radical axis; radical center; power difference; orthogonal circles; pencil of circles--definitions, classification; conjugate pencils; directrix of a point with respect to two lines and to a circle; analytical consideration (orthogonal coordinates in a plane); equation of a circle; equation of a tangent to a circle; analytical expression of power; application. 6. *Conics*: Geometrical consideration--definitions; parabola determined by a [1] focal point and directrix; ellipse and hyperbola determined by two focal points; locus of centers of circles passing a fixed point and tangent to a line or another circle; symmetry; tangent at a fixed point--existence and properties; analytical consideration (orthogonal condinates in a plane)--equation of parabolas defined by the axes of reflection and the tangent at the peak; equations of hyperbolas and ellipse defined by two axes of reflection; equation of asyntotes to a hyperbola; laws of points, whose ratio of distance from a point and a line is a constant; locus of points, the coordinates of which satisfy $Ax^2 + 2Bxy + Cy^2 + 2Dx + 2Ey + F = 0$ (which can be reduced to a simplified form by change of axes). D. POINT TRANSFORMATIONS IN A PLANE. 1. Introduction to Point Transformations: Definition as a mapping in the R^2 space; identity transformation; preservation of shapes; inverse transformation; invertibility; product of transformations; group of transformations. 2. Isometries: Isometry--definition of isometries, definition and determination of isometry; translations--definition, properties, transformations of lines and circles, product of translations, groups of translations; rotations--definition, properties, transformations of lines and circles. 3. Anti-isometries: Definition of anti-isometries; definition of a reflection in a line; product of 2 reflections. 4. Similitudes: Similarity--definition, properties, product of two similarities, group of translational similarities, transformations of lines and circles; congruent transformations--definition, properties, transformations of lines and circles. 5. Inversions: Definition; properties; preservation of angles; product of two co-central inversions; transformations of lines and circles. 6. Transformations in a Complex Plane: $z' = az+b$ (a and b are complex numbers); $z' = \frac{k}{z}$ (k is a real constant); definitions; relationships between types of transformations.

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[1] Ibid., page 217.

NATURAL SCIENCES (4 hrs a wk; 3 hrs lecture, 1 hr lab) [For Experimental Science Major (A)]

A. LECTURE. 1. Animal Anatomy and Physiology: General Studies--general morphology of a mammal (using white mouse); animal cell--structure and physiology (emphasizing the DNA and RNA in the nucleus); animal main tissues. 2. The Function of Coordination: Bones--structure, chemical composition, calcification and growth, joints; muscular system--kinds of muscles, forms, structures, properties, experimental research on muscle contraction (not the chemical [1]

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[1] Ibid., page 218.

reaction of muscle contraction), muscle energy; the nervous system--nerves tissue, neuron; the cerebro-spinal nervous system--anatomy and physiology of the main parts (not the origin and development of the cerebro-spinal nervous system, but the sensory and motor pathways of the cerebellum and the cerebro-spinal nerve); the vegetative nervous system--sympathetic and parasympathetic; the senses--the eye, sight. 3. The Nutritive Function: Digestion--food (including vitamins); enzymes--general outlines about the digestive tube (do not go into its structure); digestive glands--physiology of digestion (not including the extraction of the digestive juice); absorption of the chyle; circulation--blood and blood groups; anatomy of the circulatory system--the heart and blood vessels (general study only); physiology og blood circulation; lymph--composition, function, circulation; respiration--anatomy of the respiratory system; mechanic, physical, chemical phenomena of the respiratory system; cellular respiration (without mentioning lung capacity, the regulation of respiration, theories on cellular respiration and asphyxia); body temperature--regulation of body temperature; function of the liver. 4. Regulation of Different Organs Functions: Endocrine glands and hormones--thyroid and parathyroid glands; endocrine; pancreas; adrenals; ovaries and testes; pituitary gland; action of the hormones; regulation of the nervous system and the hormones. 6. Animal Physiology: Mammal's reproductive organs--generalities about the reproductive organs; gamchogenesis (reduction of chromosome); fertilization; sex determination; heredity--experimental research about hybridization; mono- and dihybridization, Mendel's Laws; man's heredity (explain heredity in terms of chromosomes, color blindness as an example). B. LABORATORY WORK. Dissect a mouse for general observation of the organs; observation of the animal cell; bone study (make a longitudinal and transversal section of a fresh cow bone); observation of the muscles of a frog; study of the frog muscles' elasticity and contraction; study of a pig's brain; testing the frog's reflex movements; study of the eyes, anatomy of cow's eyes; observation of the blood cells (red and white blood cells) of a frog and of man; observation of a capillary in the membrane of a frog's leg or at the tail of a gold fish; observation of the shape of a pig's heart; dissection.

NATURAL SCIENCES (1 hr a wk) [For Mathematics Major (B)]

A. ANIMAL ANATOMY AND PHYSIOLOGY. 1. Generalities: General structure of a mammal (use a mouse as an example); animal cell--composition, structure,[1] physiology; principal tissues of an animal. 2. Function of Coordination: The nervous system--nervous tissues, neurons; cerebro-spinal--the spine, the medulla, the brain; the eye and sight. 3. The Nutritive Function: Digestion--food, enzymes, general outlines of the digestive system, digestion, the absorption of chyle; blood--composition and function, coagulation, blood groups. 4. The Endocrines: Thyroid gland; endocrine; pancreas; pituitary gland. 5. General Outline of Animal Reproduction: Composition and structure of the reproductive organs; gametogenesis (formation of gametes); fertilization.

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[1] Ibid., page 219.

PHYSICAL EDUCATION (3 hrs a wk): Same as 11th Grade.[1]

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[1] Ibid., page 220.

Second Cycle

12th Grade: Modern Literature Major (Section C) and Classical Literature Major (Section D)

Subjects	MODERN LITERATURE (C) Number of Hours Per Week	CLASSICAL LITERATURE (D) Number of Hours Per Week
Vietnamese	0	0
History	2	2
Geography	1	1
Civic Education	1	1
Philosophy	9	9
First Foreign Languages	6	6
Second Foreign Languages	6	0
Classical Languages	0	6
Physics	½	½
Chemistry	½	½
Mathematics	1	1
Natural Sciences	1	1
Physical Education	3	3
Total	31 hours	31 hours

HISTORY (2 hrs a wk)

A. VIETNAMESE HISTORY (from 1884 to the present). 1. The French Domination: The establishment of the French administration--administrative policy, administrative structure (administrative, legal, economic, financial, educational, security); movements against the French; the Vietnamese society under the French domination--influence of Western civilization, material and spiritual activities. 2. Việt-Nam from 1945 to the present. B. CIVILIZATION OF VIETNAM. 1. Brief History of Its Foundation: Local basis; influence from China, India, and the West. 2. Activities: Political, economic and social; intellectual. C. WORLD HISTORY (from 1914 up to the present). 1. China from[1] the Tân Họi Revolution to the present. 2. Japan from after the Minh Dynasty to the present. 3. India: Gandhi and the national movement; independence period. 4. The First World War: Cause and consequence. 5. Western World Powers between the Two World Wars: Problems faced by England, France, U.S.; the economic depression of 1929; the dictatorial regimes (Communism in Russia, Nazism in Germany, Fascism in Italy). 6. The Second World War: Cause and consequences. 7. International Relations Since 1945: Development of world blocs; Cold War; role of the United Nations. 8. Civilization and Life of Man after 1945: In scientific and technical fields; in economic, social, cultural, religious fields.

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[1] Ibid., page 221.

GEOGRAPHY (1 hr a wk)

A. GENERALITIES. 1. Present World Economic Situation: Economic world powers; world markets. B. ECONOMIC BLOCS. 1. The Capitalist Economic Bloc: The U.S.; West Germany; Great Britain; Japan. 2. The Socialist Economic Bloc: The USSR; Red China. 3. The Third Bloc: India; Indonesia.

CIVIC EDUCATION (1 hr a wk)

A. THE NATIONAL POLITICAL STRUCTURE. 1. Free Democratic Regimes: Characteristics; different regimes; political parties. 2. Contemporary Dictatorial Regimes: Causes (political, economic, social); characteristics; forms (Marxism, Fascism). B. INTERNATIONAL ORGANIZATIONS. 1. The United Nations: Organization, operation. 2. Regional Organizations: NATO; SEATO; OAS.

PHILOSOPHY (9 hrs a wk)

A. PSYCHOLOGY. 1. Objectives: Nature of psychological phenomena; relationship between psychological and physiological phenomena; perception, sensation; association, memory, imagination, attention; abstraction and generalization, use of symbols; language and ideas; judgment and reasoning; pleasure and suffering, emotion, passion; consciousness, subconsciousness, personality; personalism, instinct, habit, volition, disposition; reason, freedom. B. LOGIC. 1. Basic Principles of Reasoning: Ordinary thinking process--[1]

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[1] Ibid., page 222.

intuition and reasoning; induction and deduction, analysis and synthesis; science and scientific spirit, science and technique; mathematics--objectives, basis, method, reasoning, use; experimental science--facts, hypothesis, discovery and verifying the laws, principles, theory; some examples of theories in contemporary physics, chemistry, physiology; social studies--psychology, history, sociology. C. ETHICS. 1. The Question of Ethics: Ethics and science; conscience--nature and value; duty and right--responsibility; justice and charity; great concepts of Eastern and Western ethics; ethics and the individual--body and intellect; human dignity--personalism and community; ethics and family life--family, marriage, birth; humanism of Confucianism, benevolence of Buddhism; charity of Christianity. D. GENERAL PHILOSOPHY. 1. Basics: Theory of cognition, basic principles of reasoning; truth; philosophy and science; philosophy and ethics; philosophy and religion; space and time--materialism; life; spirit; freedom--personalism and values; God. 2. Philosophy of the East: Generalities on Confucianism, Taoism, Buddhism. 3. Philosophical Works: Each student should read one book on Philosophy of the East, and one book on Philosophy of the West, to be chosen from: (Phisolophy of the West) Plato: Phedon, Gorgias, the Republic (Phedon, Gorgias, la Republique); Aristotle: Moral at Nicomaque (Morale à Nicomaque); Marc Aurele: Thoughts (Pensées); Descartes: Discourse on Method (Discours de la Méthode); Pascal: Thoughts and Opuscules (Pensées et Opuscules); J.J. Rousseau: Social Contract (le Contrat Social); C.L. Bernard: Introduction to the Study of Experimental Medicine (first part); Bergson: Laughter (Le Rire), Thought and Motive (La Pensées et le Mouvant), The Two Sources of Moral and Religion (Les Deux Sources de la Morale et de la Religion); Emmanuel Mounier: Personalism (Le Personalisme), Introduction to Existentialism (Introduction aux existentialismes); Gabriel Marcel: To Be and To Have (Etre et Avoir). (Philosophy of the East) The Four Letters: Dai Hoc, Trung Dung, Manh Tu, Luan Ngu; Ethics (Dao Duc Kinh); Dharma: Pada, Khoa Hu Luc.

FIRST FOREIGN LANGUAGES (6 hrs a wk)

A. ENGLISH. 1. Grammar: Review rules; emphasize writing style. 2. Reading and Literature: Reading--American civilization; literature--brief study of American literature; supplementary reading--one book of each author. 3. Written[1]

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[1] Ibid., page 223.

Assignments: Short presentation in English of topics selected by students or by the teacher; essay on common topics; translation. B. FRENCH. 1. French Civilization (4 hrs): Books--Cours de Langue de Civilisation Française (French Civilization, Mauger), Book III; the following 15 lessons: 1. Taxis, 2. Petits Métiers, 3. Parisiens et Provinciaux, 4. Gosses du Palais Royal, 5. Prise de la Bastille, 6. À la cité Universitaire, 7. La Tour Eiffel, 8. Un Grand Magasin, 9. À l'Inprimerie d'un Journal, la nuit, 10. Quand le penple fait grève, 11. Le premier voyage aérien, 12. Expositions, 13. Au Cinéma, 14. Le Zoo de Vincennes, 15. Aéroports de la Banlieue Parisienne. 2. French Literature (2 hrs): 19th Century--Vigny, Verlaine; 20th Century--Saint Exupéry, Duhamel, Colette. 3. Written Assignments: Text study; translation; essays on common topics (description, narration, letter writing).

SECOND FOREIGN LANGUAGES (6 hrs a wk)

A. ENGLISH. English for Today, Book III. B. FRENCH. 1. Vocabulary, Conversation, Reading, Silent reading, Grammar, Dictation from: Cours de Langue de Civilisation Française by Mauger, Book II, Lessons 37-70. 2. Written Assignments: a. First semester: Answer questions based on the reading and the dictation; answer questions relating to the topics studied; build sentences according to patterns; write a paragraph based on a picture, a game, or another paragraph; translate short texts which have been studied. b. Second semeter: Write short essays on common topics (descriptions, narration, letter writing).

CLASSICAL LANGUAGES (6 hrs a wk) [For Classical Literature Major (D) only]

A. SINO-VIETNAMESE. 1. Text Study (3 hrs a wk): Excerpts from Confucius, Mencius, other Chinese and Vietnamese authors. 2. Literature (2 hrs a wk): Teach briefly about the authors during the text study period. 3. Assignments (1 hr a wk): Translate from Chinese into Vietnamese (Kim Cổ Kỳ Quan, Truyền Kỳ Mạn Lục, Lam Sơn Thuc Lục, Hoàng Lê Nhất Thống Chí). B. LATIN. 1. Review: Grammar; study of poetry rhyme (poetry of 5 and 6 rhymes); general literature. 2. Assignments: Text study; translation. 3. Authors: De Signis, De Natura Deorum (Cicero); De Conjuratione Catilinae (Salbustius); Aeneidos Lib, I.II (Virgilius).[1]

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[1] Ibid., page 224.

PHYSICS (½ hr a wk)

1. Free Fall in Vacuum: Zero initial velocity. 2. The Fundamental Law of Kinetics: Definition of mass; CGS and MKS units of force; mass and acceleration. 3. Definition of Energy: Definition of potential, kinetic, mechanical energy; other forms of energy--heat, electricity, radiation, chemical. 4. Concertibility of Work and Heat: Convertibility of other forms of energy; law of energy conservation; energy unit--Joule; heat unit--calorie; principles of a four-stroke engine. 5. Pulse: Propagation of a pulse; propagation velocity; sinusoidal motion; propagation of a sinusoidal wave; wave length; experimental study of the super position of two waves--interference; standing waves (only transverse waves are discussed in connection with a fixed obstacle); Young experiment on light interference by two slits; hypothesis about light waves. 6. Electronic Radiation: Photo electric effect; blank body radiation; cathode rays; properties of X-rays; natural radioactive materials; table of electromagnetic radiation; nature of particle and wave.

CHEMISTRY (½ hr a wk)

1. Origin of Formative Chemistry: Shortcomings of a planer chemical formula and the necessity of a formative chemical formula; some concrete examples on formative chemical formulas. 2. Interpretation of Chemical Bond by Wave Mechanics: Atomic shells; molecular shells; simple, double, triple bonds--properties, examples; formative structure of a number of simple molecules--thane, ethylene, acethylene, water. a. Introduction to the History of Organic Synthesis: Man-made and natural compounds; review of the differences between mixtures and compounds; review of atomic theory, covalence; avogadro number; saturated hydrocarbons--review on methane; unsaturated hydrocarbons--ethylene and acethylene; review on ethyl alcohol, acetic acid, benzene; functional groups and radicals.

MATHEMATICS (1 hr a wk)

A. ALGEBRA. 1. Basic Concepts of Mathematical Logic: Definition of a statement; negation; meaning of the symbols: $\wedge$, $\vee$, $\Rightarrow$, $\Leftrightarrow$, $\forall$, $\exists$;[1]

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[1] Ibid., page 225.

introduction to some methods of verification--induction, deduction. 2. Sets: Definition and example; basic concepts of sets; null set; subset; complement; intersection; union. 3. Probability: Experiment on accidents; the universe: events; definition of probability in percentages; simple examples. B. STATISTICS. 1. Frequancy Distribution: Table; tabulation of facts. 2. Diagrams: Bar diagram, line diagram, pie diagram; frequency polygon. 3. Arithmetic: Definition; the *n*'th term; sum of the first *n* terms. C. GEOMETRIC SERIES. 1. Definition: The *n*'th term; sum of the first *n* terms; sum of the infinite series with the absolute value of being less than 1. 2. Decimal Logarithm: Definition; formula to evaluate logarithm of a product, a quotient, a power of integral exponent. 3. Quadratic Function: Study of the graph of a quadratic function with constant coefficients. [Do not verify the formula to find the peak of the graph.] D. TRIGONOMETRY. Definition of trigonometic function of an angle; relationships among various trigonometric functions of an angle.

NATURAL SCIENCES (1 hr a wk)

A. ANIMAL ANATOMY AND PHYSIOLOGY. 1. Generalities: General structure of a mammal (use a mouse as an example); animal cell--composition, structure, physiology; principal tissues of an animal. 2. Function of Coordination: The nervous system--nerve tissues, neurons; cerebro-spinal--the spine, the medulla, the brain; the eye and sight. 3. The Nutritive Function: Digestion--food, enzymes, general outlines of the digestive system, digestion, the absorption of chyle; blood--composition and function, coagulation, blood groups. 4. The Endocrines: Thyroid gland, endocrine; pancreas; pituitary gland. 5. General Outline of Animal Reproduction: Composition and structure of the reproductive organs; gametogenesis (formation of gametes); fertilization.

PHYSICAL EDUCATION (3 hrs a wk): Same as 11th Grade.[1]

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[1] Ibid., page 226 .

Appendix C

Bibliographic and Resource Materials in Indochinese Culture and Education

BIBLIOGRAPHY OF BILINGUAL (AND MONOLINGUAL) VIETNAMESE, CAMBODIAN & LAOTIAN TEXT MATERIALS: K-12

The following is a short bibliography of monolingual and bilingual Vietnamese and Cambodian materials available for public sale. These have been produced by educational resource centers, school districts and state agencies across the country. We have deliberately excluded one-of-a-kind items that are available on an intrastate basis, such as materials obtainable through inter-library loan. Please note that the majority of the entries are for Vietnamese or Cambodian materials, due to the fact that materials in Lao are either limited or non-existent. However, Lao materials for teachers and students are being produced by the Heartland Education Agency, Ankeny, Iowa, and will soon be available from APPLE, Inc. The package includes 210 minutes of bilingual tapes (English-Lao), a teacher's handbook (115 pp., in English) and a student's handbook which contains transcripts of the tapes and an English-Lao dictionary (over 3,500 entries). For use by secondary students and adults, these materials are geared for survival English, incorporating subjects such as culture, math, health, filling out forms, etc. Ordering information may be obtained from: APPLE, Inc., P.O. Box 1914, Des Moines, Iowa 50306.

LANGUAGE ARTS

Vietnamese Textbooks: Reading Series

I Learn the Vietnamese Syllables, Grade I
I Learn to Read - Grade II
Reader - Grade III
Reader - Grade IV
Reader - Grade V

This series was developed by the Ministry of Education in Saigon and was the official Ministry textbook series used in all public schools in Vietnam. The books have been reprinted by: Center for Applied Linguistics, 1611 North Kent Street, Arlington, VA 22209.

Fables

The Crow and the Fox
The Donkey and the Fox
Two Donkeys
Wise Turtle, or The Big Race
The Fibbing Shepherd
The Fat Hens and Skinny Chickens
Who Will Place the Rattle on the Cat's Neck?

These are short fables, translated into Vietnamese and produced in paperback form.

Vietnamese-English Illustrated Vocabulary Series, Levels 1, 2, 3

The Illustrated Vocabulary Series deals with a variety of topics. The fables and the vocabulary book are available from: BABEL Media Center, 1033 Heinz St., Berkeley, CA 94710.[1]

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[1] Ibid., page 268.

Mackey, W.F. Bilingual Education in a Binational School: A Study of Equal Language Maintenance Through Free Alternation. Rowley, Mass.: Newbury House, 1972.

> A case study of the JFK School in Berlin. In discussing factors that promote bilingualism in a school, the author examines the make-up of the population, teaching staff, selection and special characteristics of teachers. Of special interest is the author's often cited "Typology of Bilingual Education".

Macnamara, John. Bilingualism and Primary Education: A Study of Irish Experience. Edinburgh: Edinburgh University Press, 1966.

> The best single study of bilingualism in one country, especially from the standpoint of how nation-wide programs in bilingual education can be managed, or mismanaged.
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> Discusses the often disappointing efforts of the Republic of Ireland to create a school population fluent in Gaelic as well as in English.

Zintz, Miles V. "What Classroom Teachers Should Know about Bilingual Education." Albuquerque, NM: University of New Mexico, 1969. [ERIC ED 028 427]

> This report is divided into the following chapters: (1) Cross-Cultural Education; (2) Problems in Second Language Learning; (3) Classroom Methodologies; (4) Special Aspects of Vocabulary; and (5) The Bilingual School.

Zirkel, Perry A. "Bilingual Education Programs at the Elementary School Level: Their Identification and Evaluation." The Bilingual Review 2:1&2.13-21 (1975).

> This study assesses the relative effectiveness of various experimental models of bilingual education with respect to selected pupil and parent outcomes. The study shows that bilingual instructors can be an effective means of improving the educational opportunities of limited English-speaking students in the primary grades. Author also stresses the need to achieve solid commitment, continuity, and coordination on the part of both school and community if significant status is to be accorded the native language.[1]

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[1] Ibid., page 267.

Primers

The Cat and the Rat
The Happy Taxi Cab
Tuong's Special Day
The Lost Thong
Where is Pete?
Anthology of Vietnamese Folk Stories
Vietnamese Spelling/Alphabet Book

Designed to act as Vietnamese/English bilingual pre-primer/primer level readers. There are cassettes to accompany these texts. The monolingual Spelling Book was designed to encourage children to maintain their language. Available from: English-Vietnamese Bilingual Program, San Diego City Schools, Programs Division, 4100 Normal St., San Diego, CA 92113.

Vietnamese Alphabet Coloring Book

Order from: Vietnamese Bilingual Materials, Grand Rapids Public Schools, Grand Rapids, Michigan.

Vietnamese Alphabet Book and Cambodian Alphabet Book

Order from: Bilingual Program, D.C. Public Schools, 4820 Howard St., N.W., Washington, D.C. 20016.

Meanings of U.S. Holidays:

The Meanings of Christmas

The Meanings of Thanksgiving

Available from: Arizona Department of Education, 1535 West Jefferson, Phoenix, Arizona 85007. Vietnamese text with slides.

MATH, SOCIAL STUDIES AND SCIENCE

Math Terminology List

93-page glossary.

U.S. Constitution translated into Vietnamese (Vietnamese-English, Bilingual)

U.S. Constitution translated into Cambodian (Cambodian-English, Bilingual)

Order above three items from: English-Vietnamese Bilingual Program, San Diego City Schools, Programs Division, 4100 Normal St., San Diego, CA 92103.[1]

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[1] Ibid., page 269.

Social Studies Unit for Vietnamese Children in the U.S.A.

A handbook for teachers, with suggested objectives and teaching methods; covers U.S. and Vietnamese culture, geography, history, systems of measure and money, signs and symbols; includes appendices and bibliography. 40 pp.

English-Vietnamese Scientific Terminology for High School and Junior College Students:

Book I: Mathematics; Book II: Physics; Book III: Geography; Book IV: Chemistry; Book V: Natural Sciences; Book VI: Government and History.

This series lists a wide variety of English terms with appropriate Vietnamese equivalents, which will be of much help to students using English as their second language. Will also be useful to Vietnamese undergoing vocational training.

Order above items from: BABEL Media Center, 1033 Heinz Street, Berkeley, CA 94710.

U.S. History Supplements in Vietnamese and Cambodian;

Chemistry, Mathematics, Biology and Physics Supplements in Vietnamese;

Biology and Physics Supplements in Cambodian;

Order above items from: Midwest Indochinese Resource Center, 500 South Dwyer Avenue, Arlington Heights, IL 60005

CONSUMER, DRIVER EDUCATION AND HEALTH INFORMATION

Translation of Driver's Exam from Driving Handbook

Vicente Z. Serrano, Vietnamese Education Consultant, Kansas State Department of Education, 120 East 10th St., Topeka, KS 66612

Questions & Answers - Driver's Test

Pennsylvania Department of Motor Vehicles, Harrisburg, PA 17126

Driver's Guide

Department of Emergency Services, 4220 E. Martin Way, Olympia, WA 98504

Guide to Driving Practices

Department of Emergency Services, 4220 E. Martin Way, Olympia, WA 98504

Florida Driving Exam

Vu Duc Hanh, Bilingual Tutor/Language Arts Dept., Escambia County School Board, Pensacola, FL 32506

Consumer Information:

Banking, food stamps, insurance, housing, health, driving, etc. Write to: Wisconsin Ways, Resettlement Assistance Office, 4802 Sheboygan Ave., Madison, WI 53702[1]

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[1] Ibid., page 270.

A SELECTED BIBLIOGRAPHY ON INDOCHINESE CULTURAL TOPICS

The following short reference list is provided as an aid for further study. The majority of entries are for Vietnamese, mainly because much of the scholarship on Cambodia and Laos is written in French and is not readily available in the U.S.:

I. CHINESE PHILOSOPHY

1. The Analects of Confucius, Arthur Waley, trans., 1938.

2. The Canon of Reason and Virtue (Lao-tze's Tao Te Ching), Daisetz Teitaro Suzuki and Paul Carus, trans., Open Court Publ. Co., 1974.

3. The Chinese Classics, James Legge, trans., 1893.

4. Classics in Chinese Philosophy, comp. by Wade Baskin, Littlefield and Adams, Publ., Totowa, N.J., 1974.

II. VIETNAMESE, CAMBODIAN AND LAOTIAN HISTORY AND CULTURE

1. Area Handbook for South Vietnam, by American University Foreign Area Studies Division, U.S. Govt. Printing Office, Washington, D.C., 1967.

   An extensive description by a team of American researchers and Vietnamese informants of the social, political, economic and legal systems of South Vietnam. The section on the social system contains references to many aspects of Vietnamese customs and traditions.

2. Area Handbook for Cambodia, American University Foreign Area Studies Division, U.S. Govt. Printing Office, Washington, D.C., 1968.

   This handbook (and its companion Handbook for Laos) was prepared under contract to DA by scholars at American University, Washington, D.C. Designed as background information for military and foreign service officers going to Cambodia, this book may be used successfully by anyone interested in the country. While it is not intended for the "specialist" (either in economics, development, military affairs, or political science), neither is it simplistic nor superficial. A wide range of topics are discussed, ranging from history to economics to education to daily life. Useful bibliographies, maps and charts are included.

3. Area Handbook for Laos, American University Foreign Area Studies Division, U.S. Govt. Printing Office, Washington, D.C., 1972.

   See Handbook for Cambodia above. [1]

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[1] Ibid., page 271.

4. Cambodia: Its People, Its Society, Its Culture, David Steinberg et al., Human Relations Area File Press, New Haven, Conn., 1959.

   This is the companion volume to Laos: Its People, Its Society, Its Culture, and the same careful scholarship may be seen in this book. While not specifically written for the "expert", this book is a careful and clear discussion of the problems, and the background of those problems, facing Cambodia.

5. Customs and Culture of Vietnam, Ann C. Crawford, Tuttle Publ., Rutland, Vt., 1966.

   A description of many Vietnamese customs and traditions by an American resident in South Vietnam who traveled extensively throughout the country.

6. A Dragon Defiant, Joseph Buttinger, Praeger Publ., New York, 1972.

   A short history of Vietnam for the general reader, the book contains a wealth of information on the land, the people and its history.

7. Handbook for Teachers of Vietnamese Students: Hints for Dealing with Cross-Cultural Differences in Schools, National Indochinese Clearinghouse, Center for Applied Linguistics, Arlington, Virginia, 1975.

   A short guide for American teachers, containing practical information on the differences between the American and Vietnamese school systems and useful suggestions on how to help the Vietnamese refugee children adapt to the new school environment.

8. Fire in the Lake: The Vietnamese and Americans in Vietnam, Frances Fitzgerald, Little, Brown & Co., Boston, Mass., 1972.

   A sensitive and insightful examination of the American involvement in Vietnam, seen against the background of Vietnamese culture and history.

9. Getting to Know the Vietnamese and Their Culture, Vuong Gia Thuy, Ungar Publ., New York, 1976.

   Originally intended as a guide for Americans working with the Vietnamese refugees in the U.S., this short book about the Vietnamese deals very briefly with their cultural background, their values, their characteristics, and their educational system.

10. Land in Between: The Cambodian Dilemma, Maslyn Williams, William Morrow and Co., New York, 1970.

    This is a non-specialist view of Cambodia. There is a discussion of political, economic and developmental problems (presented from the Australian point of view), but essentially, Mr. Williams' book is an interesting travelogue, written in a very clever, enjoyable style.

11. Laos: Its People, Its Society, Its Culture, Frank Lebar and Adrienne Suddar, Human Relations Area File Press, New Haven, Conn., 1960.

    This is a very useful general introduction to the culture of Laos. It includes sections on history, religion, politics, daily life, education, etc. This book, and its companion on Cambodia (see No. 4 above) are extremely helpful for the general reader because of the high quality scholarship that the authors give to the subjects and because of the high quality scholarship that the authors display.[1]

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[1] Ibid., page 272.

12. Little World of Laos, Oden Meeker, Charles Scribner's Sons, New York, 1959.

This is a travelogue-journal written by a CARE representative who went to Laos just after the Franco-Indochinese war ended in 1954. His photographs are interesting and the highly readable style of the author provides an interesting view of Laos, with glimpses of Thailand can Cambodia.

13. Short History of Cambodia: From the Days of Angkor to the Present, Martin F. Herz, Praeger Publ. Co., New York, 1958.

This is a rather brief, somewhat superficial history of Cambodia up to the Independence period, designed for the non-specialist. The sections on Angkor, however, are quite interesting.[1]

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[1] Ibid., page 273.

VIETNAMESE HISTORY, LITERATURE & FOLKLORE: K-12

The following bibliography deals with cultural and literary material about Vietnam and the Vietnamese, available in English. The entries are all for the elementary or secondary level. When available, we have given prices for the books.

1. The Beggar in the Blanket and Other Vietnamese Tales, retold by Gail B. Graham, illustrated by Brigitte Bryan. New York: The Dial Press, 1970. 96 pp. $4.95.

Translated from French language sources in Vietnam by a famous woman reporter/writer who lived in Vietnam during 1966 and 1967. The fairy tales collected are her favorites and the book was basically written for her own children. Some details of these popular stories have been changed, yet the stories are nevertheless delightfully retold and a source of enjoyment for children and adults alike.

2. First Snow, by Helen Contant, illustrated by Vo Dinh. New York: Alfred A. Knopf, 1974. 32 pp. $4.50.

A children's story featuring a little Vietnamese girl who has learned to accept the cycle of life and death as a natural pattern of the universe when, for the first time, she watched the falling snow in her first winter in the U.S. The story is gentle in style, beautifully illustrated by a well-known Vietnamese artist.

3. From the Vietnamese: Ten Centuries of Poetry, edited by Burton Raffel. New York: October House, 1968. 75 pp. (Secondary and Adult)

A seven-page introduction discusses and illustrates the rules of Vietnamese versification. The rest of the book is a collection of Vietnamese poems from the 11th century to the present. Two peasant songs are included. The translations are by Burton Raffel based on literal renderings of the originals supplied by Vietnamese scholars. (The poems represent a wide range both in time and subject matter.)

4. Getting to Know the Two Vietnams, by Fred West, illustrated by Polly Bolian. New York: Coward-McCann, 1963. 64 pp.

The first half of the book, for upper elementary and junior high students, gives a comprehensive historical background of Vietnam, the achievements of President Diem's administration and the causes that led to its downfall. There is a chapter on the city of Saigon, the people, the transportation, schools, clothing and food.[1]

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[1] Ibid., page 274.

The second half deals with foreign aid in Vietnam, primarily Chinese in the North and American in the South. The life in North Vietnam is presented through the eyes of a boy brought up on a state-run farm. The author also talks about the role of different religions in Vietnam and some cultural features.

"To tell twin stories" is the stated goal of the book, yet there are only five pages devoted to the life in North Vietnam.

The writing is clear, instructive, and supplemented with beautiful illustrations, maps and a chronology of important dates in Vietnamese history.

5. KIM - A Gift From Vietnam, by Frank W. Chinnock. New York: World Publishing Co., 1971. 210 pp. (Secondary and Adult)

An editor for Reader's Digest, Mr. Chinnock tells the story of his own adopted Vietnamese child. The first five chapters describe how the family came to the decision of adopting a Vietnamese girl, his trip to Saigon to search for "their daughter", their long wait, their anxiety, expectation, frustration and finally the arrival of Kim. The remaining eight chapters describe the difficult time they had adjusting to Kim and helping Kim adjust to her new family. Recommended expecially for adoptive parents with Vietnamese children. The Chinnocks' personal experience will help them understand and handle their adopted children better. There are 30 pictures of Kim in different moods and acts.

6. Land of Seagull and Fox: Folk Tales of Vietnam, by Ruth Q. Sun, illustrated by Ho Thanh Duc. Rutland, Vermont: C.E. Tuttle Co. 1967. 135 pp. $5.50. (Secondary and Adult)

Thirty-one traditional folk stories translated in a pleasant style. The author spent one year as a lecturer at the University of Saigon, and collected many of the stories directly from her students in "versions learned at the knees of their parents and grandparents". The book is well presented, beautifully illustrated and representative; the tales reflect the universal nature of folk tales, showing man's earliest attempt to interpret his own surroundings, the basic human plight, man's inner desire to get away from harsh reality, etc. There is a short chronology of events -- both real and legendary -- in Vietnamese history. The book can serve as an entertaining source of information on Vietnam and its people.

7. Let's Visit Vietnam, by John C. Caldwell. New York: The John Day Co., 1969. $3.96.

Appropriate for upper elementary and junior high students. The first part of the book gives an outline of the history of Vietnam from the ancient past to the emergence of Ho Chi Minh and the partition of Vietnam in 1954. It also describes the way of life in different areas of the country: the rural, the highlands and the city. The second half is about the American involvement in Vietnam. The book ends with the beginning of the combat troops' withdrawal.[1]

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[1] Ibid., page 275.

In his account of events, the author tends to relate what is familiar to the Americans, such as the comparison of the nocturnal attacks of the Viet Cong on the strategic hamlets with the Indian attacks during the night in the pioneer days, which help give a clearer picture to the young reader.

Despite a few errors regarding the historical facts of Vietnam and the language, the book is easy to read, clear, instructive. It is intended for the American student who wants to know the whys and hows of the American involvement in Vietnam.

8. NHAN, a Boy of Vietnam, by Inor Forney, edited by Joann Robinson. Rutland, Vermont: Charles E. Tuttle Co., 1969. 25 pp.

Some scenes of life in Saigon seen through the eyes of a 10-year-old paper boy from a poor family. Includes: the inside of Nhan's one-room house, the presidential palace, the policeman and a would-be saboteur, the New Year's celebration in Chinatown, the moon festival, and central market. The book is filled with interesting illustrations which make the reading more attractive to children.

9. Our Friends in Vietnam, by Inor & E.H. Forney. Rutland, Vermont: Charles E. Tuttle Co., 1967. 61 pp. $1.00.

A coloring book presented in the author's own handwriting. Each page is accompanied with a drawing of the scene described. The book shows activities of ordinary people in cities and rural areas: the food they eat, the clothes they wear, the things they do, the places they go and so on.

The book is more than a coloring book. As stated, it is "designed for people of all ages who would enjoy painting or coloring in crayon and learning something at the same time about our friends in Vietnam".

10. Promises to Keep, by Paige Dixon. New York: Atheneum, 1974. 165 pp. $6.95. (Secondary and Adult)

The book deals with problems faced by an orphaned boy, half American, half Vietnamese, when he went to live with his American grandmother in a small New England town after his Vietnamese mother died. His quiet but strong personality had a good influence on his American cousin. The book also presents the American youngsters as prejudiced, cruel, thoughtless; but there are other nice boys, too.

11. Southeast Asia, by William A. Withington and Margaret Fisher. Grand Rapids: Fideler Company, 1968. 272 pp.

This is a well-presented elementary geography textbook. The first 13 chapters deal with the area in general (land, climate, history, people, farming, fishing, natural resources, crafts and industry, transportation and communication, festivals and recreations, arts). There follow chapters on each country including sections on history, geography, government, and education. The book is filled with large, interesting black and white photographs which are well-coordinated with the text to illustrate what is being discussed. Maps are also well used to illustrate various types of information.[1]

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[1] Ibid., page 276.

The sections on Cambodia and Vietnam seem fairly presented although the history, of course, is not up to date. The chapter on festivals has a description of Tet. Here and throughout the book, there are several good pictures of activities in Vietnam (and Cambodia).

12. The Story of Vietnam: A Background Book for Young People, by Hal Dareff. New York: Parents' Magazine Press, 1966. 250 pp. (Intermediate through Adult)

This is a clearly presented (primarily modern) history of Vietnam. The book begins with a chapter on the history of Vietnam before the French. The establishment of the French is given in more detail, and there is a chapter on communism and Ho Chi Minh. The last half of the book is devoted to the period since World War II, with the book ending with President Ky still in power.

The author's purpose is to provide a background for understanding American involvement in Vietnam. As a result, this is almost exclusively a political history, and is primarily concerned with the more recent periods. In places the writing seems somewhat "slanted", but the author makes it clear in his introduction that the book contains personal opinions and interpretations of facts.

13. Vietnam and Countries of the Mekong, by Larry Henderson. Rev. ed. New York: Thomas Nelson, 1967. 254 pp. (Secondary and Adult)

The first five chapters are devoted to Vietnam, ranging from the geographical and cultural background to the political and economic problems. Good background reading for high school students.

14. Viet Nam: Land of Many Dragons, by Hal Buell. New York: Dodd, Mead, 1968. 142 pp.

This is a simplified history of Vietnam for the upper elementary/junior high level, with about half the book devoted to the period of American involvement. The last two chapters deal with the impact of the Vietnamese war on the U.S. and its possible importance in the world situation. The book is illustrated with many striking black and white photographs. (Because of its publication date (1968) the concluding chapters are dated.)

15. Vietnam, Our Beloved Land, by Nguyen Cao Dam and Tran Cao Linh. Rutland, Vermont: Charles E. Tuttle Co., 1968. 124 pp. (Intermediate through Adult)

This is a collection of photographs by Vietnamese photographers designed to show Vietnam as it is remembered by the Vietnamese. The 86 photographs are grouped into the following categories, each of which begins with a brief introduction: plains and meadows, the evergreen highlands, the sea, sand dunes, cultural aspects and folklore, Vietnamese boats, the Vietnamese woman, the[1]

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[1] Ibid., page 277.

Vietnamese soldier. While these photographs have been chosen in part for their artistic value, most of them also present visually important aspects of Vietnamese culture as well as views of the land and people.

16. Vietnam: The Country, The People, by David C. Cooke. New York: Grosset & Dunlap, 1968. $4.95. (Secondary and Adult)

The book has 11 chapters covering the legendary origin of the Vietnamese, their historical background and the characteristics of their way of life as compared with those in the Western world. Chapter headings are: 1) Legend of the Kindly Dragon, 2) A Study in Survival, 3) The Family is Always First, 4) Paris of the Orient, 5) Life in a Vietnamese Village, 6) Customs and Religions, 7) The Happy Times, 8) A Different Way of Life, 9) Marriage by Arrangement, 10) Nước mắm and Hot Dog, 11) Your Future in the Stars. Most of the information collected is based on the author's personal contacts during the days he served in Vietnam as publications advisor to the SVN government.

The author dwells heavily on traditions no longer practiced in Vietnam which tend to give the reader a misleading impression of the daily life of the modern Vietnamese. He also tends to overgeneralize, and misinterpretations crop up throughout the book. Yet, it is a delightful book to read if one is looking for entertaining reading material.

17. Vietnamese Folk Poetry, translated by John Balaban. Greensboro, N.C.: Unicorn Press, 1974. 47 pp. $8.00 cloth, $4.00 paperback. (Secondary and Adult)

This is a book of traditional Vietnamese oral poems (ca dao) collected by the translator in the Mekong delta, Saigon, the Central Highlands, and Hue in 1971 and 1972. The poems in this book were chosen from around 500 recorded at that time from about 30 people ranging from a 5-year-old boy to a 72-year-old woman. In addition to the 36 short poems (the longest is a page), there is a one-page introduction and a biographical note about the translator.

18. Vietnamese Legends, compiled and translated by G.F. Schultz. Rutland, Vermont: C.E. Tuttle Co., 1965. 163 pp. $4.70. (Secondary and Adult)

The book contains 32 short stories as part of the well of folklore of Vietnam. Versions presented here are most popular ones and given in a pleasant style. The author gives a brief note on the historical background of the country, pointing out the deep influence on the culture by the neighbor to the north, yet observes that "on the Chinese base, there has developed a language, literature and civilization of distinct Vietnamese flavor", a point many foreign writers on Vietnam have missed.

19. Zen Poems, by Nhat Hanh. Greensboro, N.C.: Unicorn Press, in press. $10.00 cloth, $5.00 paperback.

This book contains 12 poems. These are written in Vo Dinh's[1]

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[1] Ibid., page 278.

ink-and-brush calligraphy (in Vietnamese) on a sheet which also interprets each verse with a drawing. The English translation (by Teo Savory and Vo Dinh) is *en face*. The poems suggest the feel of the philosophy of Zen Buddhism.[1]

[1] Ibid., page 279.